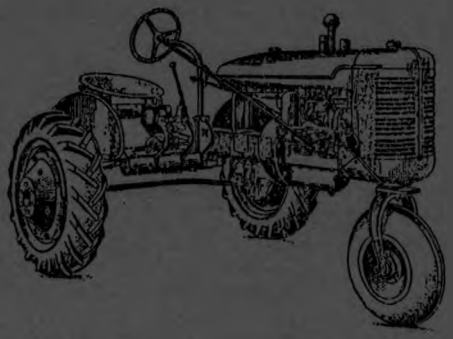
Instruction Manual

McCormick-Deering Farmall-B Tractor



With "exploded" views and parts list.

Important:

This book contains instructions for care and operation, and in addition, a parts list with detailed illustrations of the various units arranged so that parts wanted may readily be located.

INTERNATIONAL HARVESTER COMPANY
(INCORPORATED)
180 NORTH MICHIGAN AVE. CHICAGO, ILLINOIS, U.S.A.

INT. 5272. 10-5-39—8M.

Preserve This Book

(Domestic, Canada and Export)

Examine the Tractor carefully and see that all oil holes are cleaned of paint and dirt—if any threaded oil holes are found without fitting or pipe connections, look at the Lubrication Chart. If connection is shown, and not in place, it was lost and should be replaced before starting.

Special Precautions with a New Tractor

1. Before starting a new engine, remove the spark plugs and put about one teaspoonful of crankcase lubricating oil into each cylinder; replace the spark plugs and crank the engine to distribute the oil over the cylinder walls.

2. During the first one hundred hours of operation, mix one pint of engine oil with every five U. S. gallons of fuel.

3. Engine is filled with oil suitable for "running in" a new engine. *Before operating under load, the crankcase should be drained completely and filled with oil as specified in the "Lubrication Chart."*

4. Tractors for United States and Canada are properly filled with oil in all parts when shipped from the factory. *All oil is drained from Tractors shipped Export.* However, Tractor should be checked over for proper quantities of oil before starting.

5. Complete instructions for oiling are shown on "Lubrication Chart."

6. *Do not operate a new Tractor immediately on full load.* The Tractor should never be loaded to full capacity until it has been run light for a reasonable length of time. Do not overload the Tractor at any time.

7 *Read Instruction Book carefully.*

CAUTION: Based on the fire hazard and insurance regulations, we do not recommend the use of gasoline for the cleaning of parts, at least not when service is performed inside of buildings. A less inflammable fluid than gasoline should be used, such as Stoddard solvent or kerosene.

We reserve the right to make changes in design or add any improvements without incurring the obligation to install such changes on Tractors previously purchased.

Ordering Repairs

When ordering repairs be sure to give Serial Number and Model of Tractor and name and number of Part Ordered.

Send all orders to the Dealer or Branch House in charge of territory.

This book contains, in addition to instructions for operating, instructions and illustrations pertaining to certain simple adjustments and replacements which can readily be made. However, the owner should consult the service dealer before attempting a general overhauling or when any mechanical difficulties occur, as he has the necessary equipment for doing the work.

Specifications will be found on inside back cover.
Index will be found on page 1.

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NOTE:- Pages 13 and 14 are for Gasoline Operation.
Pages 9 to 12 are for Distillate or Kerosene Operations.
Page 8 is for Gasoline, Distillate or Kerosene Operations.
The balance of the book is for Gasoline, Distillate or Kerosene Operations, except as noted.

TO OWNERS:

This Tractor is designed and built to give good performance and maximum service. Quality materials and good workmanship are employed throughout the entire unit.

The suggestions and requirements for operating outlined in this book are essential to maintain satisfactory performance and economical service. The care and daily attention given the Tractor will largely determine its maintenance cost and success of operation.

Tractor Owners should use the extensive facilities offered by McCormick-Deering and International dealers when service is needed that requires the knowledge of an experienced service man. This is advisable as Dealers are kept informed on the best methods of servicing Tractors and are in a position to give satisfactory service.

OPERATING PRECAUTIONS

Read Instruction Book carefully.

Follow "Lubrication Chart."

Before cranking tractor engine, be sure:-
1. Gear shift lever is in neutral position.
2. Radiator is filled with water.
3. Engine has sufficient oil in crankcase pan.

When cranking the engine, operator should take his position so as to avoid being struck by starting crank if there is a reversal of the direction of the engine from any cause whatsoever. Do not spin the engine.

When starting the Tractor always engage clutch gradually, so engine will pick up the load slowly. This is particularly necessary when going up a steep hill, climbing out of ditches or when hitched to a heavy or difficult load. Never hitch to a stump or other object by means of a long chain or rope with slack so that when Tractor moves forward it will jerk into the load.

Never operate engine at more than the regular governed speed. Excessive speeds are harmful.

WARNING!

Do not attempt to pull when drawbar is removed.
Drawbar must be kept tight.
All hitches for trailing implements must be attached to drawbar.

Never fill gasoline tank when near an open flame or engine is running. Keep funnel in contact with metal of fuel tank when pouring in fuel, to avoid possibility of an electric spark igniting the gas. Be very careful about lighting matches near gasoline, as the air within the radius of several feet is permeated with a highly explosive vapor.

Care should be exercised when Tractor is in motion to prevent accidents and personal injuries.

Do not use the clutch or brake pedals as foot rests; this causes undue wear on these parts.

Never pour cold water into radiator if engine is very hot.

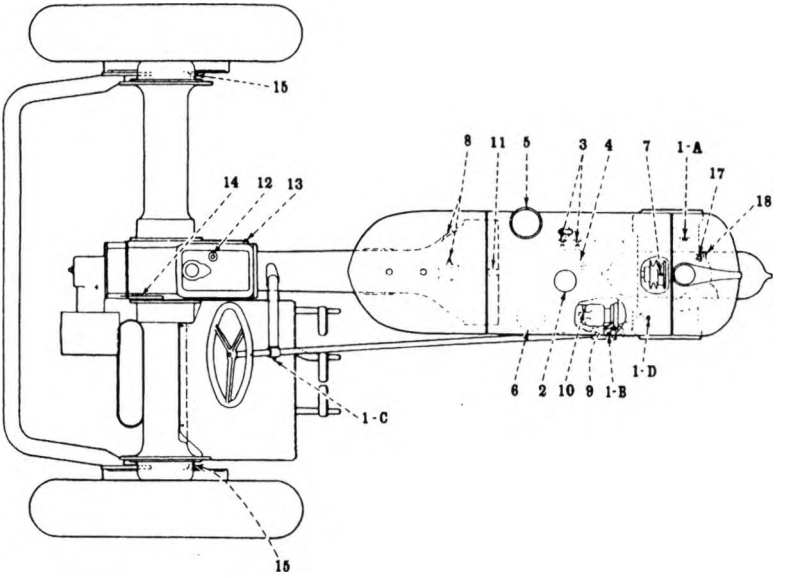
Do not overload the Tractor at any time.

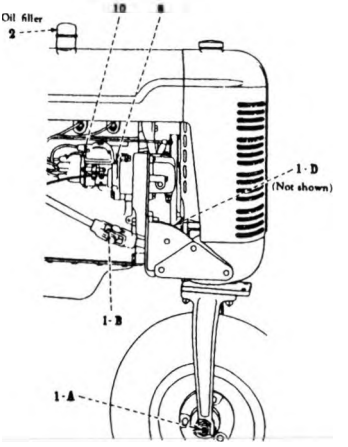
Keep correct air pressure in tires.

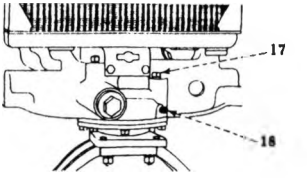
Always lock brake pedals together when travelling in high gear.

NOTE: *Be sure to read instructions on "SPECIAL PRECAUTIONS WITH A NEW TRACTOR" given on inside front cover.*

LUBRICATION CHART







KEY TO LUBRICATION CHART

(Paragraphs are numbered to correspond with numbers on the illustrations).

DAILY LUBRICATION

1A. Front axle (1). . . . . .
1B. Steering universal joint (1). . . . .
1C. Steering shaft support bracket (1).
1D. Steering worm shaft(1). . . . . .

Daily. Use pressure gun grease (chassis lubricant). Two or three strokes of the lubricator.

2. Crankcase . . . . . .

WHEN OPERATING ON DISTILLATE OR KEROSENE:
Drain crankcase oil down to level of lower test cock after *every 10 hour run* and add new oil to level of upper test cock.

WHEN OPERATING ON GASOLINE:
Drain crankcase oil down to level of lower test cock after *every 30 hour run* and add new oil to level of upper test cock.

Drain all oil from crankcase pan after every 120 hour run and refill with new oil. *Replace oil filter element at the same time.*

NOTE: Engine lubricating oil shall be of well refined oils, free from water, sediment, acid, resin or any other substance not derived from petroleum. Oil shall not corrode any metal used in engine construction.

Season	Prevailing Temperature Range	Viscosity Number
Summer	Above 80° F.	SAE-30 or 40
Spring and Fall	80° F. to 40° F.	SAE-30
Winter - Mild	40° F. to 0° F.	SAE-30 or 20
Winter - Severe	10° F. to sub-zero	SAE-10W or 20W

Winter oil, SAE-30, must have a cold test of not more than 10° F.

CAUTION: SAE-10W can be used where sub-zero temperatures prevail over long periods.

These light oils must not be used if temperature rises above 0° F., or if the engine is to be operated under a sustained heavy load, even in colder weather.

Diluting oil with kerosene is not recommended.

Do not run engine for any length of time with oil level below lower test cock.

Never test oil level while engine is running.

3. Crankcase pan (oil level) . . . Approximate capacity 5 U.S. quarts (top cock).

4. Crankcase pan oil drain plug. . Drain after every 120 hour run. (See No. 2).

5. Air Cleaner . . . . . *Clean and refill oil cup daily* to oil level bead with same grade oil as used in crankcase. *(See page 18).*

WEEKLY LUBRICATION

6. Oil filter (Purolator). . . . . (paper element) Remove and replace oil filter element with new element *after every 120 hours of operation. (See page 19).*

7. Fan hub (Filler plug) . . . . . *Once a week.* Remove plug and fill hub half full with engine oil. Replace plug. (To fill, set fan so plug is at left horizontal position).

8. Clutch release sleeve . . . . . *Every 60 hours of service.* Use pressure gun grease (chassis lubricant). Several complete strokes of the hand lubricator. (Fitting is reached through hole in left side of clutch housing).

KEY TO LUBRICATION CHART - Continued

WEEKLY LUBRICATION - Continued

9.	Impulse Coupling	*Once a week*, oil liberally with a light oil such as sewing machine or cream separator oil. *(See page 23 for complete information).* Use kerosene during cold weather.

PERIODICAL LUBRICATION

10.	Magneto.	*Every 500 hours of service.* A few drops of light oil, such as sewing machine or cream separator oil. *(See page 22 for complete information).*
11.	Clutch pilot bushing	Does not require lubrication.
12.	Transmission and differential. . (oil filler plug)	Use approved lubricant. Capacity 6 U.S. quarts. Keep lubricant in transmission up to level of plug (14) located on left forward side of transmission case, which indicates the proper oil level. *Check periodically.*
13.	Transmission and differential. . (oil level plug)	Keep proper oil level in transmission.
14.	Transmission and differential. . (oil drain plug)	Drain lubricant and refill once a season, or when necessary.
15.	Rear axle housing. . . . . (oil filler and level plug)	Use approved lubricant. Capacity 3 U.S. pints (each side). Keep lubricant up to level of plug. *Check periodically.*
16.	Rear axle housing.	Drain and refill once a season, or when necessary. (To drain, remove rear axle housing pan; clean and replace. Then fill to level of oil filler plug).
17.	Steering gear housing. . . . . (filler and level plug)	Use approved lubricant. Keep lubricant up to level of plug. *Check periodically.*
18.	Steering gear housing. . . . . (drain plug)	*Drain and refill once a season, or when necessary.* Capacity 1 U.S. pint.

NOTE: Use only high quality lubricating oils and grease. Select only those of recognized manufacture.

Keep the supply of lubricating oil clean and free from dust. Use clean containers. Keep lubricator clean and wipe dirt from fittings before using lubricator.

Approved lubricant for use in Transmission, Differential, Steering Gear and Rear Axle Housing should be a good grade of oil and conform to the following specifications:-

SAE-250 - in air temperature continually above 90° F.
SAE-140 or SAE-160 - in air temperatures 50° to 90° F.
SAE-90 - in air temperature 20° to 50° F.
Four parts SAE-90 and one part kerosene for below 20° F. air temperature.
Use a good grade of mineral oil, free from solid materials.

For lubricator fittings (hand lubricator) use pressure gun grease (chassis lubricant).

LUBRICATION - Continued

S. A. E. Numbers or weights of oil and lubricants recommended

	Engine Crankcase	Magneto & Coupling	Lubricating Fittings	Air Cleaner
Summer	SAE-30 or SAE-40	Very light, Cream Sep. or Sewing Machine Oil	Pressure Gun Grease (Chassis Lubricant)	SAE-30 or SAE-40
Winter	SAE-10-W or SAE-20-W	Very light Cream Sep. or Sewing Machine Oil*	Pressure Gun Grease (Chassis Lubricant)	SAE-10-W or SAE-20-W

** Use kerosene in magneto coupling during cold weather.*
(See Special Instructions for Cold Weather Operation on pages 16 and 17).

Approved Lubricant for Transmission, Differential, Steering Gear and Rear Axle Housing.

Air Temperatures	Transmission & Differential	Steering Gear Case	Rear Axle Housing
Continually above 90° F.	SAE-250	SAE-250	SAE-250
50° to 90° F.	SAE-140 or SAE-160	SAE-140 or SAE-160	SAE-140 or SAE-160
20° to 50° F.	SAE-90	SAE-90	SAE-90
Below 20° F.	4 parts SAE-90 1 part kerosene	4 parts SAE-90 1 part kerosene	4 parts SAE-90 1 part kerosene

Use a good grade of mineral oil, free from solid materials.

GENERAL ENGINE LUBRICATION *(See "Lubrication Chart" also).*

The engine has a pressure feed lubrication system.

Drain the engine oil completely after every 120 hours' run.

Replace oil filter element at the same time.

To pour oil into the engine, remove breather from oil filler pipe on valve housing. Test cocks are located on the side of the crankcase pan, which indicate the high and low level of the oil. The oil should never be above the high level nor below the low level. *(See "Lubrication Chart").*

The engine must not be run at high speed or under load until the new oil has had ample time to reach all bearings.

OIL PRESSURE INDICATOR

The pointer on oil pressure indicator (unless defective) should register at all times when the engine is running. Should the indicator not register, the engine should be stopped immediately and the oil system inspected to find the cause of failure.

NOTE: Under all operating conditions, the oil pressure should hold the indicator pointer in the white section.

OIL PUMP

The gear oil pump in the crankcase has a screen attached to the lower end to stop the larger dirt particles from entering the oiling system. This screen should be cleaned whenever the oil pan is removed.

BREATHER

The crankcase breather cap, which is also the cap for oil filler pipe, is located on top of valve housing. Remove breather cap and clean every 120 hours of operation, and, under severe dust conditions, more frequently.

To clean, wash breather cap in kerosene, dip in engine lubricating oil, and replace after wiping off excess oil.

LINCOLN LUBRICATING SYSTEM

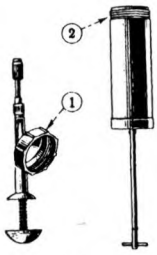


Illustration No. 1

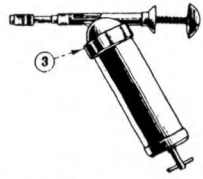


Illustration No. 1A

GENERAL INSTRUCTIONS

The lubricator nozzle will center quickly on all high pressure fittings. It will seal positively against Kleenseal fittings and likewise against ball headed and old push type fittings.

Two washers are housed within each nozzle in order to provide four wearing surfaces for contacting fittings. These washers, when worn on one side, can be turned over and used on the other side. The back washer can be put in front, after both sides of the front washer are worn. *(See Illustration No. 1B).*

TO FILL HAND LUBRICATOR

Illustration No. 1B
Nozzle

See "Lubrication Chart" for approved lubricant. *Use Clean Lubricant Only.*

1. Unscrew cap casting from tube. Fill cap casting with lubricant, flush to the bottom side of the tube threads. Be sure there are no air pockets.
2. Insert open end of tube into can of lubricant, draw back on follower rod, pushing the tube into the lubricant. Do this slowly so as to give lubricant a chance to fill the tube. When follower rod is pulled out as far as possible, turn the follower rod so that swedged ears on rod will prevent it from forcing the lubricant from the tube.
3. Screw tube into cap casting tightly and release follower rod. A few strokes of the plunger and lubricator is ready for use.

USE CLEAN LUBRICANT

Lubricant container should always be kept covered to prevent entry of dirt or dust which may clog the fittings.

OPERATION

Hold the nozzle firmly against the fitting. Push the plunger knob forward with a quick positive stroke. Allow the knob to return while still holding the nozzle firm and repeat the forward stroke with a quick snap action until sufficient lubricant has been pumped.

Should the lubricant continue to flow from the nozzle when the pump is not in operation, it is an indication that foreign material has accumulated beneath the ball check preventing it from finding its seat. To remedy, remove nozzle cap, or in case of an extension, remove extension adapter at the pump casting, withdraw packing, check spring and check ball. Clean ball and ball seat, then replace parts.

GASOLINE, KEROSENE OR DISTILLATE OPERATION

Paragraphs are numbered to correspond with numbers on the illustrations

PREPARATIONS FOR STARTING

LUBRICATION *(See "Lubrication Chart").*

Para.	*Illust.*	
1	.....	Oil magneto. Check oil level of air cleaner. Check oil level of engine crankcase. Check oil level of transmission case. Check oil level of steering gear case. Check Tractor carefully with "Lubrication Chart". If any lubrication connections are missing, replace before starting. Lubricate each place throughout entire Tractor as instructed on "Lubrication Chart".

ENGINE COOLING SYSTEM - *(Water capacity 3-3/8 U.S. gallons Approximately).*

2	.....	See that drain cap on radiator drain pipe is closed.
3	3	Remove radiator filler cap and fill radiator with clean water. Keep filled to full level. *Use soft or rain water if possible.*
4	3	Do not pour cold water into an empty system when engine is very hot.
5	.....	In temperatures below 32° F. *see "Cold Weather Operation", pages 16 and 17.*

DISTILLATE OR KEROSENE OPERATION

Paragraphs are numbered to correspond with numbers on the Illustrations.

PREPARATIONS FOR STARTING - Continued

Para. *Illust.*

6 ..... *NOTE:* Provision is made in the design of this engine to use gasoline as fuel and engine can be operated on distillate or kerosene by application of special equipment listed for distillate or kerosene operation (see Parts List.).

Economical use of distillate or kerosene requires different operating care of the engine. Follow instructions to obtain best results.

RADIATOR SHUTTER

7 2 & 3 To assist in warming up a cold engine quickly, close the shutter completely (by turning control handle all the way to the left - counter-clockwise).

When heat indicator begins to show "Hot", open shutter just enough so as to maintain the operating temperature on the high side of the working range (on heat indicator).

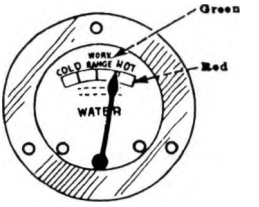


Illustration No. 2
Heat Indicator

8 3 Adjustment of shutter will vary according to tractor load, long periods of idling, or atmospheric temperature.

NOTE: Distillate or kerosene fuels are heavier than gasoline and require more heat for proper vaporization.

9 3 *IMPORTANT:* Do not start the engine in freezing weather without first closing the shutter completely.

10 ..... If engine misses or is slow to accelerate when starting, it is likely not hot enough to run on distillate or kerosene.

FUEL SYSTEM

11 3 Distillate or kerosene tank capacity is approximately 10 U.S. gallons.
Gasoline tank capacity is approximately 1 U.S. gallon.

12 ..... *Gasoline is necessary only when starting and warming up the engine.*

13 3 *The fuel and gasoline tanks have air vents in caps. Keep these vents open.*

NOTE: Distillate fuels should conform to International Harvester Company specifications.

DISTILLATE OR KEROSENE OPERATION

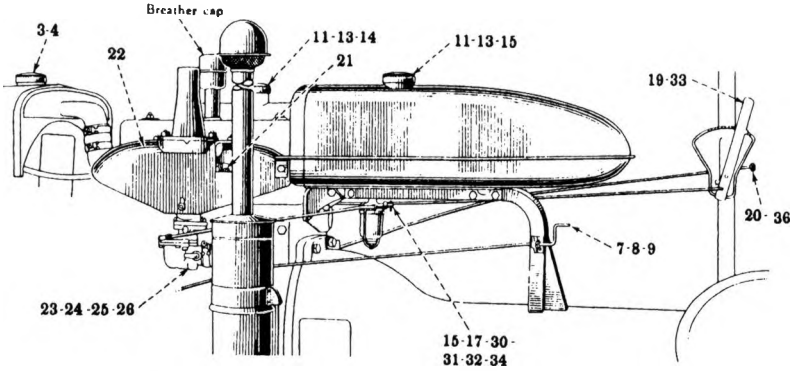


Illustration No. 3 - Distillate or Kerosene Engine

Paragraphs are numbered to correspond with numbers on the illustrations.

PREPARATIONS FOR STARTING - Continued

BEFORE STARTING ENGINE

Para.	*Illust.*	
14	3	Fill gasoline tank with clean gasoline.
15	3	Fill fuel tank with clean distillate or kerosene *with distillate or kerosene shut-off valve closed.* *Carefully strain all fuel and be sure it is free from foreign substance.*
16	.....	Open gasoline shut-off valve (under gasoline tank).
17	3	Do not open distillate or kerosene valve until engine is thoroughly warmed up. Do not have both distillate and gasoline valves open at the same time.
18	5	Place transmission gear shift lever in neutral position.
19	3	Advance governor control hand lever about one-third (push forward to advance). *NOTE:* This lever should not be fully advanced until engine has been run a few minutes; this will insure thorough distribution of the lubricating oil.
20	3	*Be sure that grounding switch control button is pushed in, so that magneto is not grounded.*

DISTILLATE OR KEROSENE OPERATION

Paragraphs are numbered to correspond with numbers on the illustrations.

MANIFOLD HEAT CONTROL

Para.	*Illust.*	
21	3	Set manifold heat control valve at "Hot" (starting position). This is done by loosening nut on manifold heat control adjusting lever and raising control lever to top notch. This is "Hot" or starting position. Cold position is with lever at bottom notch. Intermediate position is with lever in center notch. The heat control valve is made adjustable so that the heat can be regulated depending on the air temperature and load applied to the engine, as well as kind of fuel used. When starting on gasoline and operating on distillate or kerosene, it will be desirable to keep the valve in "Hot" position most of the time unless the weather is hot. In hot weather, with a heavy load on the engine, good results may be obtained with this valve in "Cold" position, but generally, better results will be secured if the intake manifold is kept hot when using distillate or kerosene. To secure this condition and not sacrifice too much power, it will be desirable to set valve at intermediate position. If not kept hot, fuel will not be properly vaporized and dilution of the crankcase lubricating oil will result. If gasoline is used with kerosene and distillate manifold, the heat control valve should be left in the "cold" position.

MANIFOLD SHIELD

22	3	When operating on distillate in cold weather, or on light loads, manifold shield should be used, but may be removed for hot weather, or when operating on heavy loads. When operating on kerosene, manifold shield must always be used. If operating a kerosene or distillate engine on gasoline, manifold shield should be removed.

TO START ENGINE

23	3	Set choke lever (on air intake housing of carburetor) about one-half way down.
24	3	Crank engine using quick up-strokes until engine starts. Do not spin the engine. The use of choke for starting will vary, depending on temperature and altitude.
25	3	As soon as engine starts, the choke should be adjusted to where the engine runs without missing, and, as the engine warms up, pull choke lever all the way up.
26	3	Do not use choke to enrich fuel mixture, except when starting the engine. *Never operate engine with choke partly on.*
27	.....	Do not apply the load until engine is warmed up.
28	.....	See that oil pressure indicator is registering pressure.
29	.....	Should engine stop on distillate or kerosene, it can be started by cranking *if it is hot enough.*
30	3	If engine has been stopped on distillate or kerosene, and is cold, close distillate or kerosene shut-off valve and drain carburetor fuel bowl. Then proceed in accordance with starting engine instructions.

DISTILLATE OR KEROSENE OPERATION

Paragraphs are numbered to correspond with numbers on the illustrations.

AFTER ENGINE IS WARMED UP

Para.	*Illust.*	
31	3	After engine is thoroughly warmed up, change over to operate on distillate or kerosene by closing gasoline shut-off valve tight, and quickly open distillate or kerosene valve.
32	3	*Never have both valves open, or partly open, at the same time, otherwise distillate or kerosene will mix with gasoline, making it unsatisfactory for starting.*
33	3	Adjust governor control lever for load to be handled.

TO STOP ENGINE

34	3	Close distillate shut-off valve and immediately open gasoline valve. Run engine on gasoline 2 or 3 minutes, long enough to empty fuel lines of distillate or kerosene and fill lines and fuel bowl with gasoline. This will insure having gasoline in the fuel bowl for starting.
35	3	Close gasoline shut-off valve.

FOR EMERGENCY STOPPING

36	3	Pull grounding switch control button out and leave out until engine stops. (This short circuits the magneto).

GOVERNOR CONTROL LEVER

Since the governor maintains constant engine speed under variable loads, the governor control lever should be used only to reduce the speed of the engine below normal operating speed; with governor control lever retarded, very little load can be handled by the engine.

The rated or governed speed is 1400 RPM; maximum idle speed is approximately 1540 RPM; minimum speed (hand throttle) is 500 - 550 RPM.

GASOLINE OPERATION

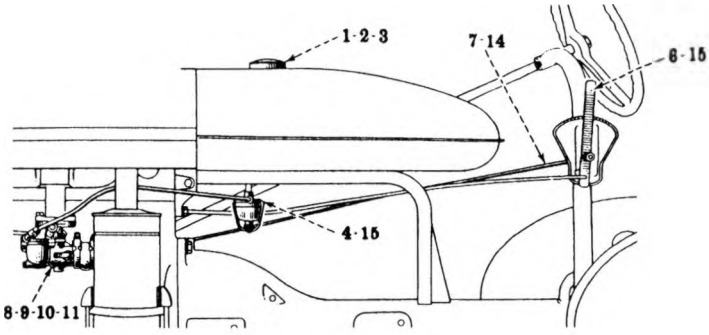


Illustration No. 4

FUEL SYSTEM

Paragraphs are numbered to correspond with numbers on the illustrations.

Para.	*Illust.*	
1	4	Fuel tank capacity is approximately 10 U.S. gallons.
2	4	The fuel tank has an air vent in cap. Keep this vent open.
		If engine is to be operated when temperature is below 32°F., *see special instructions for "COLD WEATHER OPERATION" on pages 16 and 17.* *NOTE: Radiator Shutter furnished when ordered.*

BEFORE STARTING ENGINE

3	4	Fill fuel tank with clean gasoline. Carefully strain all fuel and be sure it is free from foreign substance.
4	4	Open fuel tank shut-off valve on fuel strainer under the fuel tank.
5	5	Place transmission gear shift lever in neutral position.
6	4	Advance governor control lever about one-third (push forward to advance). NOTE: This lever should not be fully advanced until the engine has been run a few minutes; this will insure thorough distribution of the lubricating oil.
7	4	Be sure that grounding switch control button is pushed in so that magneto is not grounded.

GASOLINE OPERATION

Paragraphs are numbered to correspond with numbers on the illustrations.

TO START ENGINE

Para.	*Illust.*	
8	4	Set choke lever (on air intake housing of carburetor) about one-half way down.
9	4	Crank engine using quick up-strokes until engine starts. Do not spin the engine. The use of choke for starting will vary, depending on temperature and altitude.
10	4	As soon as engine starts, the choke should be adjusted to where the engine runs without missing, and, as the engine warms up, pull choke lever all the way up.
11	4	Do not use choke to enrich fuel mixture, except when starting the engine. *Never operate engine with choke partly on.*
12	.....	Do not apply the load until engine is warmed up.
13	.....	See that oil pressure indicator is registering pressure.

TO STOP ENGINE

14	4	Pull out grounding switch control button and leave out until engine stops; this short circuits the magneto.
15	4	It is advisable to retard governor control lever and close fuel valve.

CAUTION: Be sure that gear shifting and power take-off levers are in neutral position before dismounting from tractor.

GOVERNOR CONTROL LEVER

Since the governor maintains constant engine speed under variable loads, the governor control lever should be used only to reduce the speed of the engine below normal operating speed; with governor control lever retarded, very little load can be handled by the engine.

The rated or governed speed is 1400 RPM; maximum idle speed is approximately 1540 RPM; minimum speed (hand throttle) is 500 - 550 RPM.

GASOLINE, KEROSENE OR DISTILLATE OPERATION

TO START TRACTOR

Place left foot on clutch pedal and press down firmly, holding in this position; this disengages the clutch. Clutch must always be disengaged while shifting gears.

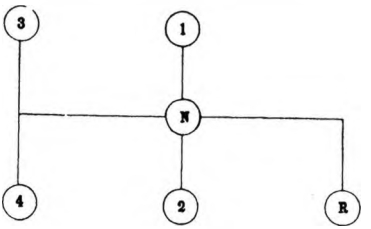
Move gear shifting lever to desired speed.

Gently release pressure on clutch pedal; this engages clutch and causes tractor to move. *Do not drive with foot resting on clutch pedal.*

CAUTION! Always lock both pedals together when travelling in high gear.

GEAR SHIFTING

Always disengage clutch before making a gear shift.



N - Neutral.
1st - First speed forward.
2nd - Second speed forward.
3rd - Third speed forward.
4th - High speed forward.
R - Reverse.

Illustration No. 5 - Gear Shifting Positions

(See inside back cover for Transmission speeds)

TO STOP TRACTOR

Disengage clutch by pressing down firmly on clutch pedal, then move gear shifting lever to neutral position. Use the brakes if necessary.

SAFETY FIRST: Stop power-take-off before dismounting from Tractor.
CAUTION: Be sure that gear shifting lever is in neutral position before dismounting from tractor.

BRAKE PEDAL LOCK

To lock brakes, push right hand pedal down and engage the locking lever. Both pedals can be locked together when desired by tripping the plate at back of pedal pads.

CAUTION! Always lock brake pedals together when travelling in high gear.

DRAWBAR

WARNING!

Do not attempt to pull when drawbar is removed.
Drawbar must be kept tight.
All hitches for trailing implements must be attached to the drawbar.

COLD WEATHER OPERATION

If Tractor is to be operated when temperature is below 32° F. certain protective precautions are necessary.

Use "Winter" engine and transmission lubricants. *(See "Lubrication Chart").*

Use a good grade of engine oil having the proper body, with a low cold test, suitable for existing climatic conditions.

Use kerosene in magneto coupling.

Transmission oil must be light enough to flow in prevailing atmosphere temperature. If transmission lubricant available is too heavy dilute sufficiently with lighter oil so it will flow readily.

Failure of transmission lubricant to flow readily will soon cause bearings to be without oil.

ENGINE STARTING

Have oil in engine crankcase light enough that engine will not be too stiff to crank.

If desired, during very cold weather, the engine oil in the crankcase pan can be completely drained each night. Do this while the oil is warm so it will drain freely.

Before refilling, warm oil thoroughly and pour into crankcase just before starting the engine, as this will insure oil thin enough to pass through screen over pump suction, also preventing condensation of moisture in crankcase pan.

Filling fuel tank at end of day's run will prevent moisture from collecting in the tank.

Use a high test winter grade of gasoline for starting.

If engine has been idle for any length of time check crankcase pan, fuel tank and fuel bowl for any ice formation before starting.

If trouble is experienced, see "Corrective Measures", page 32, also see magneto instructions on page 22.

COLD WEATHER OPERATION - Continued

WATER SYSTEM

When temperature is apt to be 32° F. or lower, there is always danger of water freezing in cooling system. To avoid such consequences, there is one simple precaution to practice. *Drain water from the cooling system at the end of every run.*

TO DRAIN WATER SYSTEM

Remove radiator drain cap.
See that drain is not plugged and that water drains completely.

IMPORTANT:

When filling radiator in freezing weather, cover entire radiator. Start engine; then put in water immediately. This prevents water from freezing during warming up period.

When engine is operating on distillate or kerosene adjust shutter to maintain operating temperature of engine.

ANTI-FREEZING SOLUTIONS

% By Volume	Distilled Glycerine			Ethylene Glycol (Prestone)		
	Freezing Point		Specific Gravity	Freezing Point		Specific Gravity
	°C	°F		°C	°F	
0%	0	32	1.000	0	32	1.000
10%	-2	29	1.029	-3	26	1.016
20%	-6	21	1.057	-9	16	1.031
30%	-11	12	1.085	-16	3	1.045
40%	-18	0	1.112	-24	-11	1.058
50%	-26	-15	1.140	-35	-31	1.070

Important!

Alcohol should not be used as an anti-freeze solution as it will not prove satisfactory.

Do not use a solution of calcium chloride or any alkaline solution as they are injurious to metal parts.

AIR CLEANING SYSTEM

The engine is equipped with a Donaldson oil wash Air Cleaner.

SERVICE AIR CLEANER DAILY: (More frequently under severe dust conditions). Clean and refill oil cup to oil level bead with same grade oil as used in engine crankcase.

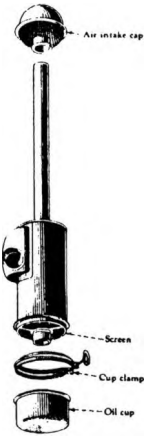


Illustration No. 6

Air Cleaner

AIR INTAKE CAP

The air intake cap is provided with an inlet screen to prevent large particles, such as chaff, leaves, etc., from entering the air cleaner.

Keep this inlet screen clean. The holes must be kept open and free of paint, as enough dust, oil or water may collect on the screen to clog up the holes enough to restrict the flow of air to the engine, thereby interfering with the cleaning action of the air cleaner. Restricted air flow will also cut down on the horse power delivered by the engine.

WASHING CLEANER

Inspect lower screen at intervals frequent enough to insure clean screens. It may be necessary to clean the lower screens every 50 hours of operation, if operating in an atmosphere heavily laden with dust, chaff, or lint.

When the cleaner has removable lower screens, loosen the clamp on the center tube and remove the two lower screens for washing. If the third screen is plugged, remove the entire cleaner and wash thoroughly.

When the cleaner has no removable screens, remove the entire cleaner and wash thoroughly in kerosene. Replace the air cleaner, make sure all joints are air tight and the screens are held firmly in place. Replace air intake cap and replace oil cup properly filled with oil. Make sure oil cup is held securely in place by the cup clamp.

GENERAL PRECAUTIONS

To prevent the entrance of dirt into the engine, it is absolutely essential that frequent inspections be made of flexible rubber connections to the carburetor and air cleaner, or hose and hose clamps when used. Flexible connections should be replaced before they deteriorate. To eliminate any undue strain on the connections, make sure pipes line up. See that all joints between the air cleaner and the cylinders of the engine are tight; this includes flexible or hose coupling, carburetor and manifold joints and gaskets. All gaskets must be in good condition and bolts drawn up tight.

CARE OF OIL FILTER AND ELEMENT

Illustration No. 7
Sectional detail of oil filter
(Purolator).

The oil filter performs the very essential function of filtering the lubricating oil in the crankcase of the engine continuously while engine is running, keeping the oil free from all dirt and abrasive matter. The dirt filtered from the oil is deposited in the filter.

IMPORTANT! *This oil filter element must be replaced with new element every 120 working hours.*

NOTE: Drain and refill crankcase oil completely after every 120 hours of operation at the same time filter element is replaced.

WARNING! Use of washed or cleaned filter element is not satisfactory.

Stop engine.

Remove oil filter base drain plug, allowing the oil filter to drain.

Unscrew and remove retaining bar "A".

Lift up and remove outer shell "B".

Remove element "C" and replace with new element. In some cases where clearance is small, it may be necessary to lift the outer shell and element together in order to remove.

Flush off the base with kerosene.

See that the case gasket "D" is in position, then replace the drain plug, filter element, case, retaining nut, and draw the nut up tight.

Check the oil level in crankcase. Now start up the engine and inspect the filter for oil leaks. *(See "Lubrication Chart").*

NOTE: To avoid delays, the owner should carry an extra element on hand for replacement at the proper time.

CARBURETOR - (Zenith Model 61 AX7)

(GASOLINE, KEROSENE OR DISTILLATE).

The presence of dirt and water will disturb the functioning of the carburetor. Clean periodically.

The engine and carburetor are correctly set when shipped from the factory. If, for any reason, this setting has been disturbed, the following procedure should be followed.

ADJUSTING

Close idle adjustment to its seat by turning to the right (or in), then open one turn.

Start engine and run until thoroughly warm.

Run engine at the low idling speed (without any load).

Close throttle by pulling governor control lever all the way back. If engine misses or rolls, slowly turn idle adjustment in or out until engine runs smoothly. Speed up engine for a few seconds, then recheck idle.

The fuel screen should be cleaned occasionally. Fuel screen is removed by unscrewing fuel line fitting. Clean and reassemble. Flange nuts, which hold carburetor to manifold, should be checked periodically for tightness.

NOTE: Periodically check the screws fastening the fuel bowl to fuel bowl cover and see that cover screws are kept tight to avoid any air leak past the fuel bowl cover gasket.

KEROSENE OR DISTILLATE ONLY

MAIN JET ADJUSTMENT

To regulate main jet adjustment, advance governor control lever approximately 1/4 (push forward to advance), and turn the main adjustment clockwise, shutting off the fuel so the speed of the engine drops because of lean mixture; then open until engine runs smoothly. After tractor is put under load, readjust main adjustment, if necessary, either leaner or richer for best operation. Always adjust so engine runs as lean as possible with smooth operation.

SPARK PLUGS AND CABLES

Spark plugs should be removed every 200 to 300 hours or oftener, if necessary, for cleaning and checking gaps between electrodes. A gap of .020" to .025" should be maintained between the electrodes. When making this adjustment, always bend the outer electrode and never the center electrode as it may damage the insulator. If the gap between the electrodes is too great, due to improper setting or burning off the ends, engine will misfire and be hard to start.

The spark plugs selected after careful tests as best suited for this engine is the Champion No. 15 or AC No. 84 and should be used.

Only a complete set of either type of spark plug should be used in the engine.

NOTE: To remedy fouling or sooting, use a hotter (light service) spark plug.

To remedy pre-ignition and burning of electrodes, use a colder (severe service) spark plug.

CAUTION! Never scrape or clean the insulator with anything which will scratch the porcelain, scratched porcelain allows carbon and dirt to accumulate mush faster.

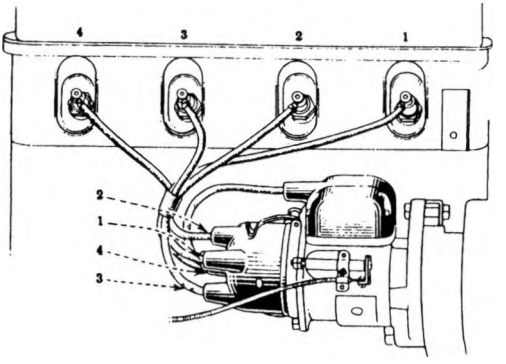


Illustration No. 8

H-4 Magneto - Wiring Chart.

MAGNETO (IHC TYPE H-4)

LUBRICATION

Every week oil impulse coupling liberally. Use light oil. Use kerosene in cold weather.

Fill distributor bearing oil cup once *after 500 hours of service. DO NOT OIL OFTENER* as excess oil might work to the breaker points, causing rapid point wear. Use same grade of oil as used in the engine crankcase.

After approximately 500 hours of operation, pack recess in breaker arm post with grease. Wipe parts clean before regreasing. Also pack small quantity of grease back of breaker arm rubbing block. See I.H.C. Dealer for approved grease.

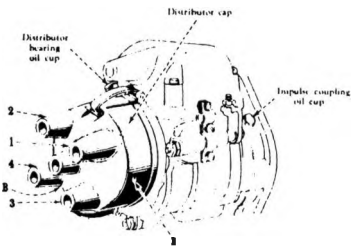


Illustration No. 9
H-4 Magneto, Oil Cups, etc.

Every 2000 hours of operation, or at least every 2 years, clean and repack the rotor bearings and the distributor gear case. *(This job should be done by a competent service man).*

Regrease the distributor gear chamber *every 2000 hours of operation* or oftener. Use only I.H.C. high temperature long life magneto grease. This operation should be done by a competent service man at the same time that the ball bearings are regreased.

If the operator desires to grease the distributor gears and bearing, the following instructions should be followed -

Keep all parts clean of dust. Remove distributor cap and distributor rotor. Take out two screws "C" *(see Illustration No. 11)* and remove distributor gear cover "D" *(see Illustration No. 11).* Do not damage gasket. Turn engine or magneto rotor until the beveled tooth on the rotor pinion is between the two semi-circular marked teeth on distributor gear. Then pull the gear off its bearing. Remove most of the old grease and wipe out any oil. Clean the distributor gear base. Fill the gear base 4/5 full of I.H.C. approved magneto grease. Place beveled tooth on rotor pinion between the two semi-circular marked teeth on distributor gear and press gear on shaft by hand. The amount of grease should be regulated so that the gear does not have a tendency to ride forward due to compression of the grease. Pack about 1/2 of the remaining open area in chamber with grease. Be sure that gears are properly timed, then reassemble the parts in proper order. Make sure that distributor rotor key enters keyway and push it all the way on. Be sure that no dust or dirt enters this chamber.

DISTRIBUTOR CAP

Distributor cap should be kept reasonably free of dust and oil deposits inside and outside.
Care must be taken to keep the two small ventilator holes "B" (see Illustration No. 9) open at all times to insure long life of the distributor.
Also keep distributor rotor clean.

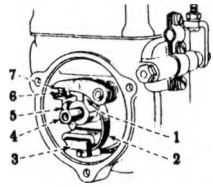


Illustration No. 10
Breaker Points

Ref. No.	Description
1	Breaker arm rubbing block.
2	Breaker arm spring.
3	Spring anchor.
4	Rotor shaft.
5	Point support screw.
6	Adjustable breaker point.
7	Breaker arm point.

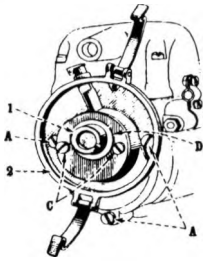


Illustration No. 11
H-4 Magneto with Distributor cap and rotor removed

Ref. No.	Description
1	Rotor spindle.
2	Distributor body.

BREAKER POINTS

The breaker points should be inspected at intervals of from 200 to 300 hours of operation for adjustment and general conditioning. The point opening should be .013" when rubbing block is on high point of cam.

A gauge of this thickness is furnished with tool equipment.

It is very important that no oil finds its way into the breaker chamber and onto the breaker points. A dirty breaker chamber means very much reduced breaker point life. Oil or grease on the breaker points are great factors in producing rapid point wear.

At the time of breaker point inspection, be sure to remove all traces of oil or dirt from all parts in the breaker chamber. If any oil appears on the breaker cam, clean with a dry cloth and apply a light film of IHC magneto grease over the entire surface of the cam.

TO ADJUST POINTS

Remove distributor cap, turn engine over until distributor rotor points toward No. 1 terminal on distributor cap and impulse coupling just trips. Then remove distributor rotor and distributor body. (Do not turn distributor spindle when removing distributor body). Insert gauge between breaker points. If points are too wide or too close, loosen screw slightly. Adjust so gauge will slip snugly in opening. (If necessary, use sharp fine file to polish contact surfaces. One point should be slightly rounded. *(See Illustration No. 12.)*

TO REPLACE: When replacing breaker arm complete, assemble spring anchor only half way in the groove. Spring anchor is pushed into correct position when distributor body is replaced. Put rotor on distributor spindle, making sure that key in rotor enters keyway in rotor spindle, and turn until rotor points approximately at No. 1 position, with engine on top dead center, No. 1 firing stroke. Then replace distributor body assembly on magneto. (Be sure rotor shaft enters D shaped hole in rotor pinion). Remove rotor and replace 3 screws, *see "A", Illustration No. 11,* in distributor body. Replace rotor and distributor cap.

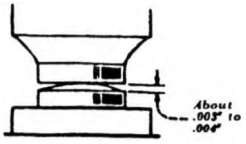


Illustration No. 12
Dressing Breaker Points

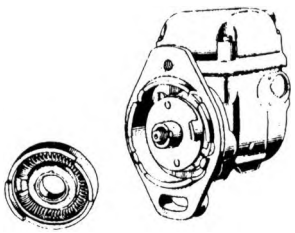


Illustration No. 13
Magneto Impulse Coupling.

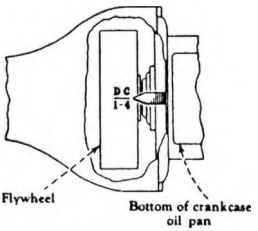
TIMING THE MAGNETO

Crank the engine until No. 1 piston (the piston next to the radiator) is on the upper dead center of the compression stroke. The compression stroke can be determined by removing the No. 1 spark plug and placing the thumb over the opening and have someone crank the engine until an outward pressure is felt. Continue cranking slowly until the D.C. No. 1 mark on the flywheel is in line with timing pointer on the clutch housing cover. (Timing pointer can be seen through opening in bottom of clutch housing) *(as shown in Illustration No. 13A)*. Both intake and exhaust valves should be closed at this time.

Remove the distributor cap and turn magneto coupling in a counter-clockwise direction (as viewed from the coupling end) until the arm on the distributor rotor points toward the No. 1 terminal on the distributor cap.

Assemble magneto to engine, making sure that lugs on the impulse coupling engage in slots on magneto drive coupling. (Assemble magneto so that top is as close to crankcase as possible).

Insert magneto mounting bolts loosely in magneto flange, just enough to hold magneto in place. Then turn the engine one complete revolution to next top dead center. Next, pull the upper part of the magneto mounting flange away from the engine until impulse coupling just trips.



View from under-side of clutch housing.

Illustration No. 13A
Timing Pointer

To check timing, crank engine slowly until top dead center of No. 1 cylinder is reached, at which time impulse coupling should just trip.

Tighten mounting bolts securely. Attach spark plug cables to engine and magneto. Start by connecting No. 1 cylinder spark plug to socket marked "1" on distributor block, connect next socket with No. 3 cylinder, next with No. 4 cylinder, next with No. 2 cylinder. *(See Illustration No. 8)*.

The magneto is now correctly wired and timed.

COOLING SYSTEM

Always use clean water (rain or soft water preferred).

Water from creeks and stagnant pools usually contains dirt or other matter that leaves a deposit in system that impairs cooling efficiency.

Radiator and water system should be cleaned occasionally.

TO CLEAN OUT DIRT AND SLUDGE

Drain system.

Fill radiator with a solution of 2 pounds ordinary washing soda with 3-3/8 U.S. gallons of water (water system capacity).

Leave radiator filler cap off and run engine until the water is hot, then drain and flush with clean water.

RADIATOR CORE

Over-heating is often caused by clogged or bent radiator fins.

Spaces between radiator fins can be cleaned by use of an air or water hose.

Use care in straightening bent fins and cleaning so as to not injure tubes or break the bond of fins to tubes.

Radiator core with fins loose or broken from tubes will cause overheating.

CAUTION!

When engine is hot and water level is below top of tubes in radiator do not pour cold water into system. This frequently causes cylinder head of engine to crack.

REMOVING FAN BELT

To remove fan belt, loosen fan spindle and lower fan spindle in fan bracket enough to allow fan belt to slip over bottom pulley, then work belt up over fan blades.

REPLACING FAN BELT

When replacing the belt, the reverse procedure should be followed, except that the belt can be started on lower pulley by hand, and, by slowly turning engine over, belt will find correct position.

ADJUSTING FAN BELT

To adjust fan belt, loosen up fan spindle, and move spindle up or down until correct tension as described on next page is obtained; then tighten spindle.

COOLING SYSTEM - Continued

To Adjust Fan Belt

A - Fan belts should be examined frequently to be sure proper tension is maintained.

B - "V" type belts do not need as much tension as the flat type belt.

C - The proper tension is obtained when the belt can be depressed, without effort, by the thumb (between the two pulleys) approximately 3/4" to 1" depending on the length of belt between pulleys.

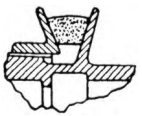
D - After a new belt is broken in (approximately 50 hours of operation) examine tension and adjust if necessary.

E - Care must be taken to have belt wide enough so that it will not draw down to the bottom of the "V" in pulley; this will wear out the belt.

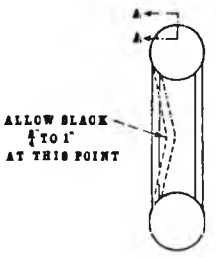
Note:- If pulley, on which belt bottoms in the groove, is of the adjustable type, movable flange should be adjusted for narrower groove until belt does not touch bottom when proper tension (as explained in paragraph "C") is obtained.

F - *Do not have "V" type belts too tight.*

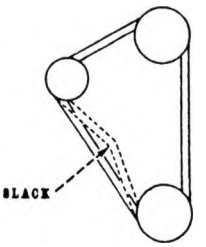
G - When belt becomes grease soaked, or so badly worn that it no longer gives side surface on the crankshaft pulley, but sinks down to the bottom of "V" in pulley, it should be replaced, as it no longer gives sufficient surface contact to drive fan at the proper speed.



Section A-A Flange type belt adjustment



Adjustment—two pulley type.



Adjustment—three pulley type.

Illustration No. 14

VALVE CLEARANCE ADJUSTMENT

Check valves for clearance every 400 hours and adjust if necessary.

Clearance of .014" is necessary between end of valve levers and valve stems when valves are closed - when engine is warm.

To determine when valves are closed proceed as follows -

Remove spark plug from No. 1 cylinder which is next to radiator.

Place thumb over the opening and crank engine slowly until an outward pressure can be felt. This indicates No. 1 piston is moving toward upper dead center of compression stroke. Continue cranking slowly until the D.C. No. 1 mark on the flywheel is in line with the timing pointer on the clutch housing cover. (Timing pointer can be seen through opening in bottom of clutch housing)*(See Illustration No. 13A).*

Both valves are then closed on compression stroke of No. 1 cylinder.

Check and adjust clearance of two valves for No. 1 cylinder.

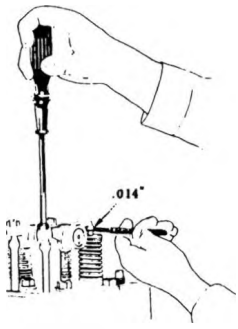


Illustration No. 15
Gauging valve levers
with a feeler gauge.

Then crank engine through 1/2 of revolution and check and adjust clearance of two valves for No. 3 cylinder.

Continue this procedure turning engine 1/2 revolution at a time and measuring and adjusting clearances of each cylinder's valves in succession according to firing order of engine, which is 1, 3, 4, 2.

TO ADJUST VALVES

Remove valve housing.

Loosen lock nut.

Adjust screw in valve lever so gauge will snugly slip between end of valve lever and valve stem.

Tighten lock nut and recheck for clearance with gauge. *(See Illustration No. 15).*

Replace valve housing.

CARBONIZED CYLINDERS

In case the engine knocks continuously and does not develop the normal amount of power, it may be that the combustion chamber walls are coated with carbon. If the cylinders are carbonized, remove the cylinder head, scrape off the carbon from the head, piston head and combustion chamber. It is also advisable to regrind the valves at this time.

When replacing cylinder head, *follow the instructions below* under heading "Gaskets" regarding tightening of nuts as it is important to secure an even pressure on all studs.

GASKETS

Before putting on new gaskets, the surface for the joint must be thoroughly cleaned. When tightening up a joint after a new gasket has been inserted, screw up all nuts fairly snug, then tighten uniformly, giving each nut a small part of a turn at a time. Continue this until all nuts are tight. Do not screw one nut down perfectly tight, and then go to the next, as you will not secure an even pressure on the gasket in this manner. *After engine has been running a few minutes, tighten the nuts again.*

CAUTION:- Be sure to adjust valve tappet clearance after the last tightening of cylinder head stud nuts. (See "Valve Adjustment").

CRANKSHAFT BEARINGS, PISTONS AND RINGS

We cannot impress too strongly the necessity of having an experienced mechanic do the work on replacement of crankshaft bearings, pistons and rings, grinding valves, adjusting the connecting rod bearings, etc.

ENGINE CLUTCH

The engine is equipped with a spring-loaded 9" diameter single-plate dry disk clutch.

CARE OF THE ENGINE CLUTCH

The clutch is so designed that it requires a minimum of attention. It is important, however, that the throw-out bearing be kept properly lubricated. This can easily be done by following the instructions given on "Lubrication Chart".

CLUTCH CLEARANCE

It is very necessary that a clearance of 1/2" be maintained between the clutch release bearing and the clutch release levers. In order to maintain this clearance, the clutch pedal should have a free movement of 1-1/2". As the clutch wears, this free movement decreases and adjustment should be made.

Clutch may be badly damaged unless sufficient free movement of foot pedal is maintained. The correct free movement can easily be maintained by adjusting the length of clutch operating rod. To adjust length of rod, loosen and turn nuts on rear end of clutch operating rod until correct free movement is obtained; then tighten nuts. (Nuts on clutch operating rod can be reached through hole in bottom of rear of clutch housing tube).

BRAKES

Brakes are external contracting bands on forged steel drums, mounted on differential shafts in housings. Brakes are operated by foot pedals which can be operated either individually or interlocked.

ADJUSTMENT *(See Illustration No. 16)*

To adjust brakes, jack up rear end of tractor, remove pin "A", loosen lock nut "B", turn adjusting yoke "C" until proper adjustment is obtained. Then replace pin "A" and tighten lock nut "B".

The correct adjustment is obtained by adjusting each brake until wheel drags slightly with yoke connected to shaft; then back up until wheel is free (about 1/2 to 1 turn of yoke).

CAUTION! Be sure brakes are equally adjusted.

TO EQUALIZE BRAKES

Lock brake pedals together. Drive tractor in high gear and apply brakes. If one wheel skids or drags, back off adjusting yoke "C" about 1/2 turn on that wheel and try again. Continue this procedure until brakes hold equally.

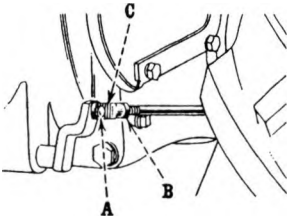


Illustration No. 16
Brake Adjustment.

SEAT ADJUSTMENT

The seat on this Tractor is adjustable to suit the size and weight of the operator.

ADJUSTMENT

1. Locate seat for comfort by removing four bolts holding spring lower support brackets to seat support brackets, and re-install at desired position.

2. Adjust springs for flexibility by relocating stop screws under spring leaves at point which gives most comfortable ride. Stop screws should just contact spring with seat in free position. Be sure stop screws are set in same relation to spring on both sides.

TO WASH TRANSMISSION

Remove transmission oil drain plug (preferably when oil is warm); allow time for complete drainage, and replace plug.

Fill the transmission case with kerosene to regular oil level. Then start the engine and allow tractor to operate in low gear (no load) for one minute.

Remove the drain plug, allow complete drainage of kerosene, then replace plug and fill to regular level with fresh lubricant. *(See "Lubrication Chart").*

BELT PULLEY (WHEN ORDERED)

The gear shift lever must be in neutral position when operating belt pulley.

Throttle down engine to low idle speed; disengage clutch and move power take-off gear shift lever back until gears are in mesh, then slowly engage clutch.

When not in use belt pulley should be removed from tractor and the exposed shaft should be covered with pulley shaft guard.

POWER TAKE-OFF (WHEN ORDERED)

TO OPERATE POWER TAKE-OFF WITH TRACTOR RUNNING

Throttle down engine to low idle speed; disengage the clutch and move power take-off gear shift lever back until gears are in mesh, shift transmission gears to the speed that is desired to run the tractor, then slowly let in clutch. The power take-off is started and stopped by the same clutch as the tractor. Therefore, be sure to disengage clutch before moving the power take-off gear shift lever.

TO OPERATE POWER TAKE-OFF WITH TRACTOR STANDING STILL

The gear shift lever must be in a neutral position.

Throttle down engine to low idle speed; disengage the clutch and move power take-off gear shift lever back until gears are in mesh, then slowly let in clutch.

When power take-off is not in use, cover shaft with power take-off shaft guard.

METHOD OF OBTAINING REAR WHEEL TREADS OF
66", 70", 74", 78", 82", 86", 90" and 94".

Eight adjustments at 4" increments can be obtained by means of attaching the rim in 4 different positions on wheel combined with 2 positions of wheel on hub *as shown in Illustration No. 17.*

NOTE: When rims are reversed, change the wheels putting right hand wheel on left hand side and vice versa, in order to keep tread of tire pointing in correct direction of rotation as shown by arrow on tire.

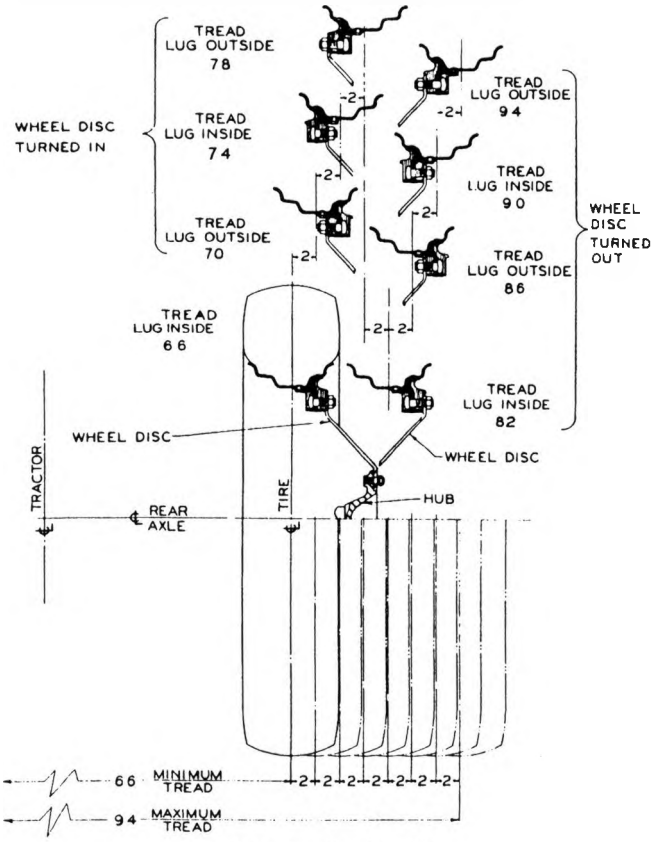


Illustration No. 17.

NOTE: All dimensions shown are in inches.

CORRECTIVE MEASURES

Study the problem before making any changes.

If any adjustments are to be disturbed, the original setting should be noted, so this same setting may be restored in case the part changed does not remedy the trouble.

Failure to Start:

- No gasoline in carburetor.
- Fuel valve closed.
- Carburetor choked too much.
- Magneto grounded.
- Engine speed control lever not advanced.
- Gears engaged.
- Distillate instead of gasoline in carburetor (for starting).

Irregular Speed:

- Governor sticking, out of adjustment, or worn.
- Throttle shaft bent or out of alignment.

Lack of Power:

- Governor out of adjustment.
- Exhaust pipe clogged.
- Engine speed control lever not advanced.
- Clutch slipping.
- Air cleaner pipe clogged.

Overheating:

- Insufficient amount of water.
- Fan belt slipping.
- Excess load.
- Inside of radiator and cylinder block limed up or clogged with dirt.
- Outside of radiator or radiator screen covered with dirt or chaff.
- Excess carbon in the cylinders.
- Carburetor improperly adjusted.

Missing and Backfiring:

- Water in the fuel.
- Air leaks around the intake manifold.
- Engine not warmed up.
- Red-hot carbon deposits in cylinder.

Lack of Oil Pressure:

- Insufficient amount of oil.
- Oil diluted or not as specified.
- Oil filter clogged.
- Dirt under the oil pressure regulating valve.
- Broken oil pressure indicator.
- Oil pump strainer clogged or pump not working.

Knocking:

- Excess carbon in the cylinders.
- Sticky valve or improperly adjusted valves.
- Loose piston pin, connecting rod, camshaft, or crankshaft bearings.
- Broken piston rings or loose pistons.

Lack of Compression:

- Sticky, dirty, pitted or improperly adjusted valves.
- Stuck, worn or broken piston rings.
- Worn pistons.
- Leaky cylinder head gasket.

Excess Fuel Consumption:

- Choke out.
- Air intake pipe or air cleaner clogged.
- Incorrect amount or improper grade of oil.
- Leaky carburetor fuel valve.
- Carburetor adjustment too rich.

Lack of Fuel:

- Fuel low in the tank.
- Vent in fuel tank filler cap plugged.
- Fuel valve closed or only partially opened.
- Clogged fuel strainer screen, fuel line or carburetor strainer.

Defective Ignition:

- Wrong kind, old, cracked, dirty or poorly set spark plugs.
- Broken, loose or improperly connected wiring.
- Dirty distributor block disk.
- Stuck or broken brushes.
- Dirty, pitted or improperly set breaker points.
- Breaker arm not free on its bearing or the breaker arm spring weak or broken.
- Magneto not timed correctly with the engine.
- Impulse coupling dirty, dry or lubricated with heavy oil.

Explosions in exhaust pipe often occur just after starting, due to first charges not firing in cylinder and passing through into exhaust pipe, where burning gases from first few explosions will ignite them.

IMPORTANT INSTRUCTIONS

FOR

STORING AND HOUSING TRACTORS

When a tractor is not to be used for a period of time, it should be stored in a dry and protected place. To leave equipment outdoors, exposed to the elements, will result in materially shortening the life of the machine.

The following procedure should be followed when a Tractor is placed in storage and these precautions should be repeated every six months thereafter. We also recommend caution to be practiced in starting an engine that has been in storage.

Wash or clean and completely lubricate the Tractor *(refer to Lubrication Chart)*.

When an engine is placed in storage:

1. Drain water from the cooling system.

2. After the engine has become cold, remove the spark plugs and pour a quantity of "SAE-50" lubricating oil of a good grade into each cylinder. One-half tea-cup full of oil for each cylinder is recommended for the larger engines with a proportionally less amount for smaller engines.

3. Remove valve housing cover and flush valves, rocker arms and push rods with "SAE-50" oil. (If any evidence of rust is found, remove before lubrication.) Replace valve housing cover.

4. Flush magneto automatic impulse coupling with lubricating oil.

5. Plug up the end of breather pipe with a piece of rag.

6. Remove the oil filter element. (If any evidence of rust is found on the center stud, clean thoroughly.) Replace filter element with new and drain out any sludge from filter base.

7. Drain fuel from fuel tank and carburetor and clean out fuel strainer glass bowl at fuel tank or at fuel pump.

BEFORE STARTING ENGINES THAT HAVE BEEN IN STORAGE

1. Remove spark plugs and pour a mixture of one-half gasoline and one-half light lubricating oil into each cylinder (one-half pint per cylinder is enough).

2. Remove valve housing cover and flush valve and valve operating mechanism with the same mixture.

3. Crank engine rapidly until excess oil has been blown out of spark plug holes. This operation will loosen any tight piston rings and wash old gummy oil from valves and pistons.

4. Flush out crankcase with kerosene and fill with specified lubricating oil. *(See "Lubrication Chart").*

5. Be sure filter has a new element before starting engine.

6. Remove crankcase breather pipe plug.

7. Install spark plugs.

8. Fill water cooling system.

9. Fill fuel tanks.

10. Start engine and let run slowly; observe if any valves are sticking. If so, pour small quantity of kerosene on valve stem until loose.

11. Assemble valve housing cover.

CAUTION! Do not, immediately after starting, accelerate the engine rapidly or operate at high speed.

By following the above, a minimum of difficulty will be experienced.

LIST AND ILLUSTRATIONS

Detailed illustrations together with list of parts in numerical order showing descriptions are included in this section.

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SEAT AND PLATFORM

I H C Part No.	Description
49370 DX	Platform, complete.
50570 D	Seat assembly.
49369 D	Seat support bracket right hand base.
49371 D	Pedal guard.
50571 DX	Seat hinge rod, complete.
50577 D	Seat spring clamp plate, left hand.
50578 D	Seat spring clamp plate, right hand.
50579 D	Seat spring support plate.
50580 D	Seat lock rod.
50581 D	Seat lock rod clip.
50582 D	Seat lock rod spring.
50583 D	Seat spring adjusting bolt.
50586 D	Seat spring, complete, left hand.
50587 D	Seat spring, complete, right hand.
50601 D	Seat, complete (less upholstery).
51181 DX	Seat support bracket, left hand.
51182 D	Seat support bracket, right hand.
52965 D	Foot rest.

STARTING CRANK AND TOOLS

I H C Part No.	Description
43527 DAX	Tool box, complete.
53385 DX	Starting crank, complete.
15204 D	Starting crank pin.
21438 DBX	Magneto gauge.
45192 D	Adjustable wrench, 9".
46190 DA	Spark plug wrench.
49173 D	Starting crank mounting bracket, complete.
51298 D	Double end socket wrench.
Q 3803	Lubricator (Lincoln 3 ounce) *(See list of detail parts on page 54)*.
2587 T	Pliers.

DRAWBAR

I H C Part No.	Description
49372 DX	Drawbar, complete (Not Swinging Drawbar).

FENDERS

I H C Part No.	Description
51179 DX	Rear fender, complete.

RADIATOR GRILLE - HOOD

I H C Part No.	Description
†51144 DX	Hood, complete.
*51148 DX	Hood, complete.
51149 DX	Radiator, complete.
52963 DX	Radiator grille, complete.
13047 DA	Radiator drain pipe cap.
20075 D	Radiator hose connection.
29970 D	Radiator hose clamps.
43658 D	Name plate ("Farmall").
43983 D	Radiator cap, complete.
43984 D	Radiator cap gasket.
47232 D	Radiator mounting stud.
47240 D	Radiator pad.
50237 DX	Fan housing, complete.
50957 D	Hood fastener.
50957 D	Radiator grille fastener.
50958 D	Hood fastener spring.
50958 D	Radiator grille fastener spring.
51003 D	Radiator brace.
52964 D	Radiator drain pipe.

* *Used on Kerosene or Distillate Engines Only.*
† *Used on Gasoline Engines Only.*

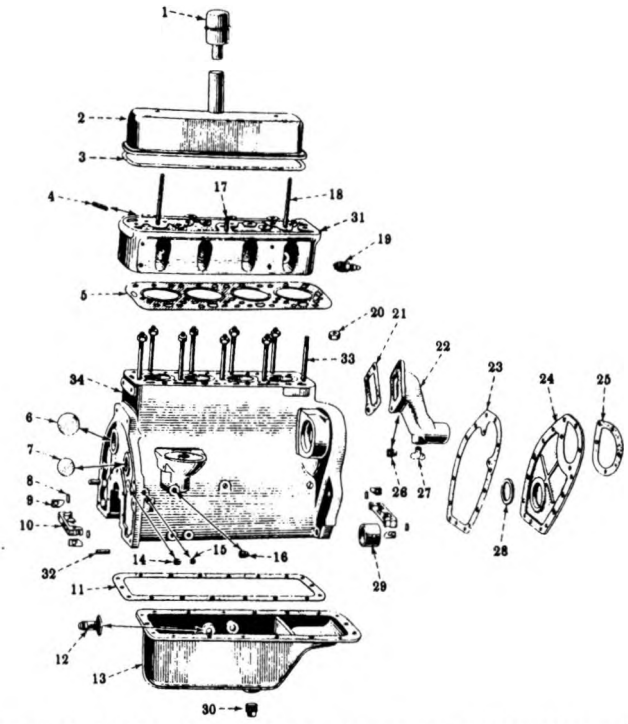
AIR CLEANER AND CONNECTIONS

I H C Part No.	Description
51363 D	Air cleaner, complete (Donaldson - 4").
48861 D	Air cleaner hose connection.
51064 D	Air cleaner hose clamp.
51493 D	Air intake cap.
52870 D	Body assembly.
52871 D	Oil cup assembly.
52872 D	Oil cup retaining clamp assembly.

MISCELLANEOUS, IGNITION, ETC.

I H C Part No.	Description
27618 D	Spark plug cable reinforcement.
28409 D	Spark plug cable No. 4 plug.
28589 D	Spark plug cable No. 1 plug.
41335 D	Magneto bolt washer.
43407 D	Spark plug cable Nos. 2, and 3 plugs.
46168 D	Magneto flange gasket.
46868 D	Magneto mounting clip.
50075 D	Spark plug cable assembly, complete.
53618 D	Chassis gasket package.
53628 D	Engine gasket package.
37762 H	Spark plug gasket.

CYLINDER HEAD, CRANKCASE, ETC.

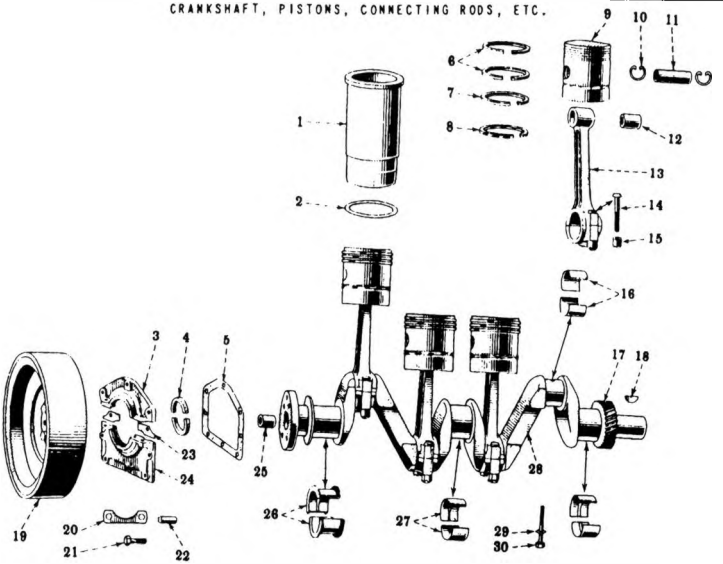


Unnumbered parts in the illustration are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description	Ref. No.	I H C Part No.	Description
1	49049 D	Breather	19	43403 D	Spark plug (Champion No. 15).
2	43379 DAX	Housing.		46276 D	Spark plug (A.C. J-7).
3	43378 DA	Gasket.	20	4097 DA	Nut.
4	45223 DA	Stud.	21	46871 D	Gasket.
5	43353 DA	Gasket.	22	6764 DX	Elbow.
6	23139 V	Plug, 2".	23	46179 D	Gasket.
7	13001 D	Plug, 1-5/8".	24	46122 DX	Cover.
8	43445 D	Felt.	25	45875 D	Gasket.
9	43446 D	Gasket.	26	.....	Pipe plug, 1/2".
10	6100 D	Plate, front and rear.	27	45314 DA	Plug.
11	43458 D	Gasket.	28	43442 D	Oil seal.
12	1998 TA	Test cock.	29	43439 D	Bushing.
13	43457 DBX	Crankcase pan.	30	.....	Pipe plug, 3/4".
14	.....	Pipe plug, 1/4".	31	6716 DX	Cylinder head.
15	50410 DA	Pipe plug, 1/8".		6716 DY	Cylinder head with valves.
16	.....	Pipe plug, 1/4".	32	15945 D	Dowel.
17	24537 D	Stud.	33	24433 D	Stud.
18	45574 D	Stud.	34	6342 DBX	Crankcase.

When ordering parts, always use IHC Part Numbers.

CRANKSHAFT, PISTONS, CONNECTING RODS, ETC.



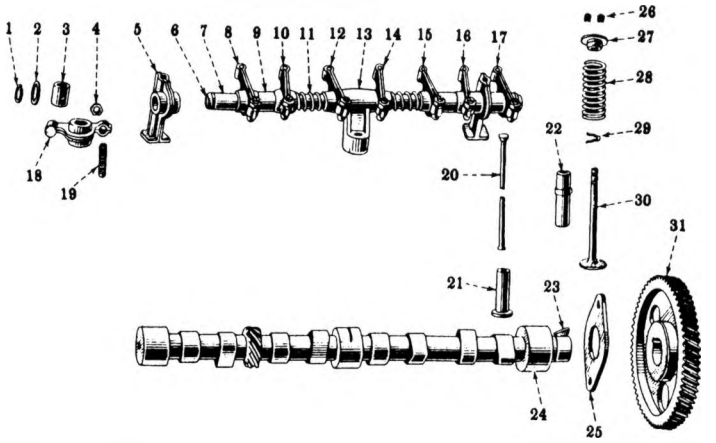
Unnumbered parts in the illustration are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description	Ref. No.	I H C Part No.	Description
1	6075 DX	Sleeve with ring.	20	46349 D	Lock.
2	24434 D	Packing ring.	21	29951 D	Bolt.
3	6101 D	Retainer, upper.	22	24550 D	Pin.
4	24425 D	Oil seal.	23	43447 D	Gasket.
5	43448 D	Gasket.	24	6102 D	Retainer, lower.
6	24416 DA	Ring (compression).	25	43291 D	Bushing.
7	35493 D	Ring (taper) (compression).	26	50861 D	Main bearing, rear (.030" undersize).
8	143276 D	Ring (oil control).		50859 D	Main bearing, rear (standard).
	*32030 DA	Ring (oil control).		50860 D	Main bearing, front and center (standard).
	† 6074 DAX	Piston with pin.	27	50862 D	Main bearing, front and center (.030" undersize).
	† 6074 DAY	Piston with pin and rings.		46402 DAX	Crankshaft (standard), complete.
9	* 6742 DAX	Piston with pin.	28	46411 DAX	Crankshaft (.030" undersize), complete.
	* 6742 DAY	Piston with pin and rings.	29	30638 D	Bolt lock.
10	35651 H	Retainer spring.	30	24430 D	Bolt.
	24414 DB	Piston pin.	...	43287 D	Sleeve with piston.
11	53159 D	Piston pin (005" oversize).	...	43286 D	Set of 4 cylinder sleeves with pistons.
12	24415 D	Bushing.	...	50863 D	Main bearings, front, center and rear (standard).
13	30926 DBX	Connecting rod, complete.	...	50864 D	Main bearings, front, center and rear (.030" undersize).
14	24412 DX	Bolt.	...	*51777 DA	Sleeve with piston.
15	24413 D	Nut.	...	*51778 DA	Set of four cylinder sleeves with pistons.
	35578 DX	Connecting rod bearing.			
16	35584 DX	Connecting rod bearing (.030" undersize).			
17	46870 DA	Pinion (35 teeth).			
18	10430 V	Key.			
19	6402 DA	Flywheel.			

* *Used on Distillate and Kerosene Engines Only.*
† *Used on Gasoline Engines Only.*

When ordering parts, always use IHC Part Numbers.

CAMSHAFT, VALVES AND LEVERS

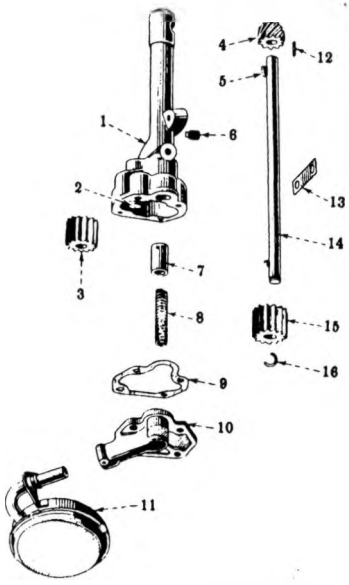


Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description
1	43375 D	Snap ring.
2	43374 D	Washer.
3	24564 D	Bushing.
4	38763 H	Adjusting screw nut.
5	42099 DA	Bracket, end.
6	43360 D	Shaft end plug.
7	43362 DX	Shaft.
8	43364 DAY	Valve lever, R.H. (intake) with screw.
	43364 DAX	Valve lever, R.H. (intake).
9	43373 D	Spacer.
10	43363 DAY	Valve lever, L.H. (intake) with screw.
	43363 DAX	Valve lever, L.H. (intake).
11	24541 D	Spring.
12	43366 DAY	Valve lever, R.H.(exhaust) with screw.
	43366 DAX	Valve lever, R.H.(exhaust).
13	6089 DA	Bracket, center.
14	43365 DAX	Valve lever, L.H. (exhaust).
	43365 DAY	Valve lever, L.H.(exhaust) with screw.
15	43364 DAY	Valve lever, R.H.(intake) with screw.
	43364 DAX	Valve lever, R.H.(intake).
16	43363 DAY	Valve lever, L.H.(intake) with screw.
	43363 DAX	Valve lever, L.H. (intake).
17	43366 DAY	Valve lever, R.H.(exhaust) with screw.
	43366 DAX	Valve lever, R.H.(exhaust).
18	43365 DAX	Valve lever, L.H.(exhaust).
	43365 DAY	Valve lever, L.H.(exhaust) with screw.
19	16067 D	Adjusting screw.
20	47386 D	Push rod.
21	47384 D	Tappet.
22	6088 D	Guide.
23	13711 D	Key.
24	43251 DA	Camshaft.
25	43249 D	Thrust plate.
26	42026 D	Collar key.
27	42040 D	Spring upper seat.
28	24544 DA	Spring.
29	42098 D	Retainer.
30	42024 D	Intake valve.
	42025 D	Exhaust valve.
31	6779 DA	Gear.
...	49387 D	Valve housing washer.

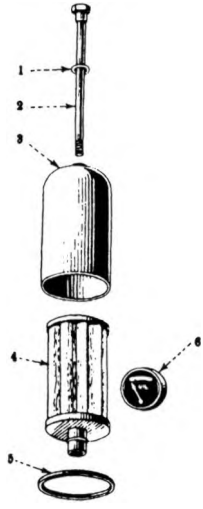
When ordering parts, always use IHC Part Numbers.

OIL PUMP



Ref. No.	I H C Part No.	Description
...	43416 D	Oil pump, complete.
1	6096 DX	Body with plug and idler shaft.
	6096 DY	Body with idler shaft and drive unit.
2	35647 H	Idler shaft.
3	35631 H	Idler gear.
4	16112 D	Spiral gear.
5	7699 TM	Key.
6	.....	Pipe plug, 1/4".
7	61261 V	Pressure valve.
8	43414 D	Spring.
9	43415 D	Gasket.
10	6098 D	Cover.
11	31589 D	Screen assembly.
12	G 1123	Pin
13	46629 D	Screw lock.
14	43412 D	Drive shaft.
15	35630 H	Body gear.
16	27999 H	Retainer.

Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

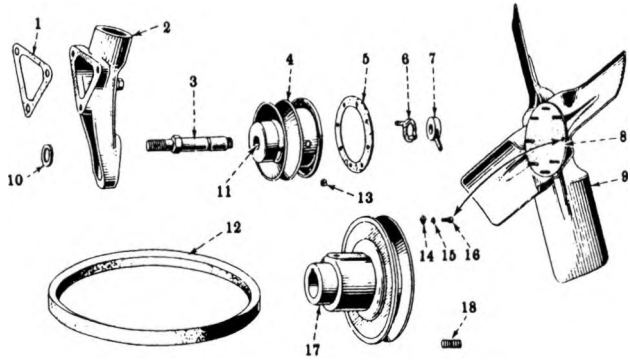


OIL FILTER

Ref. No.	I H C Part No.	Description
1	13727 D	Gasket.
2	43418 D	Retainer bar.
3	43417 DX	Case.
4	39515 D	Element.
5	13728 D	Gasket.
6	43987 D	Oil pressure indicator.

When ordering parts, always use IHC Part Numbers.

FAN AND FAN DRIVE

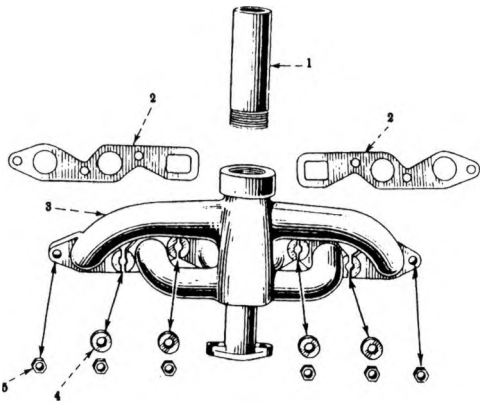


Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description
...	24529 DA	Fan, complete (16" diameter).
1	43294 D	Gasket.
2	6432 DA	Bracket.
3	25957 D	Spindle.
4	24630 D	Hub assembly.
5	11154 VA	Gasket.
6	12470 VA	Washer.
7	62786 VX	Nut assembly.
8	32985 D	Plate.
9	32984 D	Blade assembly.
	32984 DX	Blade assembly with plate.
10	43293 D	Washer.
11	11155 V	Cork washer.
12	46869 D	Belt.
13	32606 H	Plug.
14	.....	No. 12 nut.
15	.....	Lockwasher, 3/32 x 1/16".
16	.....	Fillister head screw, No. 12 x 1/2".
17	6502 D	Pulley.
18	.....	Headless set screw, 3/8 N.C. x 7/8".

When ordering parts, always use IHC Part Numbers.

MANIFOLD AND EXHAUST PIPE (FOR GASOLINE ENGINES)



Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

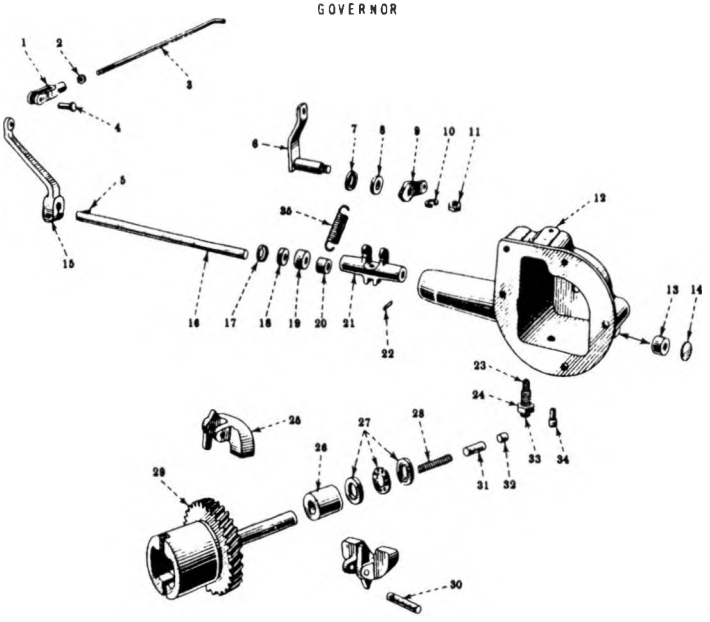
Ref. No.	I H C Part No.	Description
1	47701 DA	Pipe.
2	48696 D	Gasket.
3	6717 DAX	Manifold.
4	24523 D	Washer.
5	37684 H	Nut.

When ordering parts, always use IHC Part Numbers.

MANIFOLD AND EXHAUST PIPE
(For Distillate or Kerosene Engines)

I H C Part No.	Description
6743 D	Exhaust pipe.
6744 DBX	Exhaust and intake manifold, complete.
6866 D	Manifold heat valve.
13090 D	Exhaust and intake manifold plug.
19963 D	Exhaust pipe stud nut.
20229 D	Heat valve shaft lock nut.
21526 D	Manifold heat valve shaft screw.
24523 D	Intake and exhaust manifold stud washer.
45097 D	Manifold heat valve shaft groove pin.
46102 D	Manifold heat shield stud.
48674 D	Manifold heat valve shaft collar.
48696 D	Intake and exhaust manifold gasket.
48892 DB	Manifold heat shield, complete.
52521 D	Manifold heat valve shaft.
G 3243	Exhaust pipe stud.
37684 H	Manifold heat shield stud nut.
37684 H	Manifold stud nut.

GOVERNOR

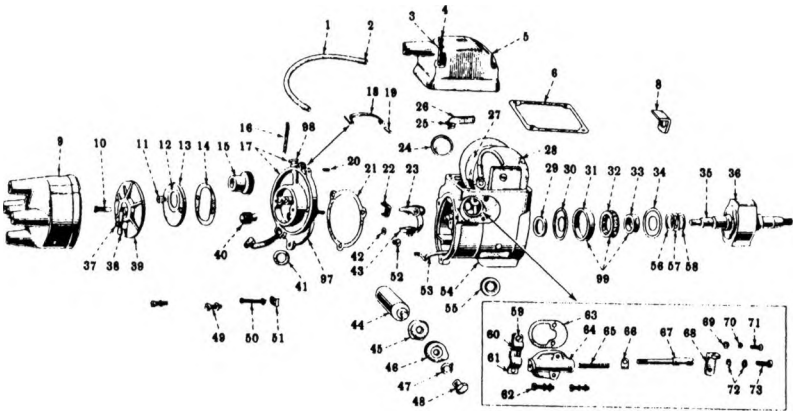


Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description	Ref. No.	I H C Part No.	Description
1	17730 D	Fork.	21	6816 DA	Lever.
2	.....	Nut, 1/4" N.F.	22	19496 D	Pin.
3	43617 DA	Rod.	23	28078 D	Spring.
4	14611 H	Fork pin.	24	50046 D	Bumper spring body cap.
5	R 25	Key.			
6	46947 DAX	Lever.	25	6506 DX	Weights (in pairs).
7	46950 D	Retainer.	26	49325 D	Sleeve.
8	46949 D	Seal.	27	43481 D	Ball bearing.
9	46945 DX	Lever.	28	49218 D	Spring.
10	.....	Lockwasher, 3/8".	29	6339 DXA	Pinion assembly.
11	.....	Nut, 3/8" N.F.	30	46924 D	Pin.
12	6340 DX	Housing, complete.	31	49219 D	Pin.
13	45753 D	Bearing.	32	49220 D	Stop pin.
14	13083 D	Plug.	33	31804 D	Body.
15	6507 DA	Arm.	34	46942 D	Retainer pin.
16	46943 D	Rockshaft.	35	46944 DA	Spring.
17	43483 D	Retainer.	...	41359 D	Governor speed change lever stop.
18	43482 D	Seal.			
19	46939 D	Bushing.	...	54041 D	Governor housing bolt.
20	45753 D	Bearing.			

When ordering parts, always use IHC Part Numbers.

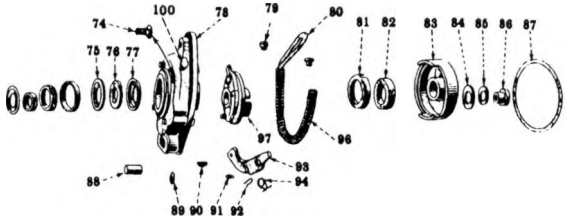
MAGNETO



Unnumbered parts in the illustration are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description	Ref. No.	I H C Part No.	Description
...	53180 D	H-4 Magneto with grounding switch.	25	E4A-546	Screw.
			26	47452 D	Secondary lead-out.
			27	47439 D	Coil, complete.
1	49125 D	Cable.	28	49593 D	Insulator.
2	37291 D	Terminal.	29	E4-226	Felt.
3	38609 DA	Washer.	30	47454 D	Retainer, inner.
4	49791 D	Screw.	31	E4A-352	Bearing outer race.
5	47449 DAY	Cover, complete.	32	E4A-353	Retainer with balls.
6	47453 D	Gasket.	33	E4A-351	Bearing inner race.
8	46868 D	Mounting clip.	34	E4A-324	Oil flinger.
9	47413 DX	Cap.	35	21341 D	Cam.
10	32032 DXA	Brush, complete.	36	47455 D	Rotor with bearings.
11	.....	Screw, 8 - 32 x 1/2".	37	47427 D	Nut.
12	49418 D	Felt.	38	47428 D	Arm.
13	49416 DX	Cover with seal.	39	47425 DX	Rotor.
14	49419 D	Gasket.	40	47417 DX	Pinion.
15	49420 D	Spindle.	41	49423 D	Felt seal.
16	E4-216	Oil well felt.	42	21394 D	Washer.
17	49422 D	Body with oiler and seal.	43	47432 D	Spring anchor.
			44	47546 D	Condenser.
18	51666 D	Spring.	45	47438 DA	Washer, inner.
19	51667 D	Pin.	46	48341 D	Washer, outer.
20	47424 D	Pin.	47	48342 D	Lockwasher.
21	47408 D	Gasket.	48	48340 D	Terminal.
22	21388 DBX	Point with support.	49	47409 D	Screw.
23	47431 DA	Breaker arm assembly.	50	.....	Screw, 8-32 x 1-1/4".
24	48343 D	Plug.			

MAGNETO - Continued



Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description	Ref. No.	I H C Part No.	Description
51	48339 D	Clip.	77	47473 D	Retainer, outer.
52	21393 D	Screw.	78	6515 DX	Mounting flange, complete.
53	47433 DX	Primary lead-out.			
54	6482 DAY	Frame, complete.	79	47465 D	Button.
55	22828 D	Washer.	80	47464 D	Wick.
56	E4A-305	Shim light.	81	47294 D	Felt retainer.
57	E4 -212	Shim, medium.	82	47295 D	Felt.
58	E4A-372	Shim, heavy.	83	47292 D	Drive member.
59	.....	Screw, 8-32 x 1/4".	84	24603 D	Washer.
60	50768 D	Clamp.	85	.....	Light lockwasher, 1/2".
61	50769 D	Support.	86	47470 D	Nut.
62	.....	Screw, 8-32 x 3/4".	87	46168 D	Gasket.
63	48472 D	Gasket.	88	47468 D	Stop pin.
64	6674 D	Housing.	89	46785 D	Lockwasher.
65	48475 D	Spring.	90	4167 T	Key.
66	48473 D	Contact.	91	47461 D	Washer.
67	48474 D	Plunger.	92	47462 D	Snap ring.
68	46931 D	Link.	93	47459 DB	Pawl.
69	.....	Nut, 10 - 32.	95	47293 DX	Magneto member, complete.
70	.....	Lockwasher, No. 10.			
71	51285 D	Screw.	96	47822 D	Spring.
72	.....	No. 10 lockwasher.	97	6483 DY	Body.
73	E4A-358	Screw.	98	E4 -295	Oiler.
74	.....	Screw, 1/4" - 20 x 9/16".	99	E4 -294	Bearing.
			...	21314 D	Coil core.
75	47474 D	Retainer, inner.	100	27311 D	Oiler.
76	47475 D	Oil seal.	...	21342 D	Breaker cam key.

When ordering parts, always use IHC Part Numbers.

CARBURETOR (ZENITH MODEL 61 AX7)

(48616 DA - Kerosene or Distillate)
(52499 D - Gasoline)

I H C Part No.	Description
12428 D	Taper pin.
12435 D	Main jet washer.
†13754 D	Drain plug.
†16825 D	Lower plug.
21210 D	Throttle shaft packing washer.
24520 D	Carburetor gasket.
30593 D	Idle adjusting screw.
30594 D	Idle adjusting screw spring.
35514 D	Float axle.
42191 D	Throttle shaft packing cap.
42191 D	Air shutter shaft packing cap.
53771 D	Throttle body assembly.
†53772 D	Fuel bowl assembly.
*53773 D	Fuel bowl assembly.
53774 D	Throttle plate.
53775 D	Throttle shaft and lever assembly.
†53776 D	Venturi (No. 14).
†53777 D	Well vent (No. 23).
†53778 D	Main jet (No. 17).
53779 D	Idler jet (No. 16).
†53780 D	Main discharge jet (No. 50).
*53781 D	Main discharge jet (No. 50).
53782 D	Fuel valve assembly (No. 25).
53783 D	Float assembly.
53784 D	Air shutter assembly.
53785 D	Air shutter shaft assembly.
*53786 D	Main jet adjustment.
53787 D	Air shutter shaft hole plug.
53788 D	Bowl to body gasket.
53789 D	Float bracket.
53790 D	Throttle stop pin.
*53791 D	Drain cock.
53792 D	Fuel valve washer.
53793 D	Lower plug washer.
53794 D	Main discharge jet washer.
53795 D	Float bracket pin.
53796 D	Filter screen assembly.
53797 D	Throttle shaft hole plug.
53798 D	Air shutter shaft packing washer.
53799 D	Air shutter lever locating pin.
*53800 D	Venturi (No. 15).
*53801 D	Well vent (No. 26).
*53802 D	Main jet (No. 22).

* *For 48616 DA Carburetor Only.*
† *For 52499 D Carburetor Only.*

RADIATOR SHUTTER AND HEAT INDICATOR
(Regular with Kerosene or Distillate Engines)

I H C Part No.	Description
51420 D	Radiator shutter.
8161 D	Radiator shutter control rod carrier.
38146 D	Radiator shutter control rod coupling pin.
51421 D	Radiator shutter control rod, front.
51422 D	Radiator shutter control rod, rear.
51423 D	Radiator shutter control rod bracket, front.
51424 D	Radiator shutter control rod bracket, rear.
51427 D	Radiator shutter control rod pin.
52506 D	Radiator shutter control rod center.
52507 D	Radiator shutter control rod coupling.
52682 D	Heat indicator clip.
53619 D	Heat indicator gauge.
53620 D	Heat indicator bracket.
	DETAIL PARTS OF SHUTTER (51420 D)
53004 D	Spring.
53005 D	Shutters and operating bar assembly.
53006 D	Bottom tie bar and bearing bar assembly.
53007 D	Bell crank and operating link assembly.
53008 D	Frame and bearing bar assembly.

MAGNETO AND GOVERNOR CONTROLS

I H C Part No.	Description
43650 D	Governor control lever spring.
43651 DA	Governor control pivot pin.
48259 D	Governor control sector.
48260 DA	Governor control lever.
49605 D	Governor control rod guide.
49642 D	Grounding switch control wire bracket.
51006 D	Magneto grounding switch control wire.
51007 D	Magneto grounding switch control wire clip, front.
51008 D	Magneto grounding switch control wire clip, rear.
51299 D	Governor control rod swivel.
51300 D	Governor control rod equalizer spring.
53393 D	Governor control rod equalizer spring, rear.
53972 D	Governor control rod.

FUEL AND GASOLINE TANKS AND CONNECTIONS

I H C Part No.	Description
*49230 DX	Gasoline tank, complete with cap.
49606 DX	Fuel tank, complete with cap.
23977 DA	Fuel tank filler cap gasket.
*23995 D	Gasoline tank filler cap.
23995 D	Fuel tank filler cap.
29899 D	Fuel pipe coupling nut.
49601 D	Fuel tank support bracket, rear.
49602 D	Fuel tank support bracket, front.
†51066 DX	Fuel strainer, complete.
*51495 DX	Fuel strainer, complete.
*51496 DX	Gasoline tank shut-off needle valve.
*51497 DX	Fuel pipe (gasoline tank to strainer), complete.
†51498 DX	Fuel pipe (strainer to carburetor), complete.
*52892 DX	Fuel pipe (strainer to carburetor), complete.

* *Used on Distillate or Kerosene Engines Only.*
† *Used on Gasoline Engines Only.*

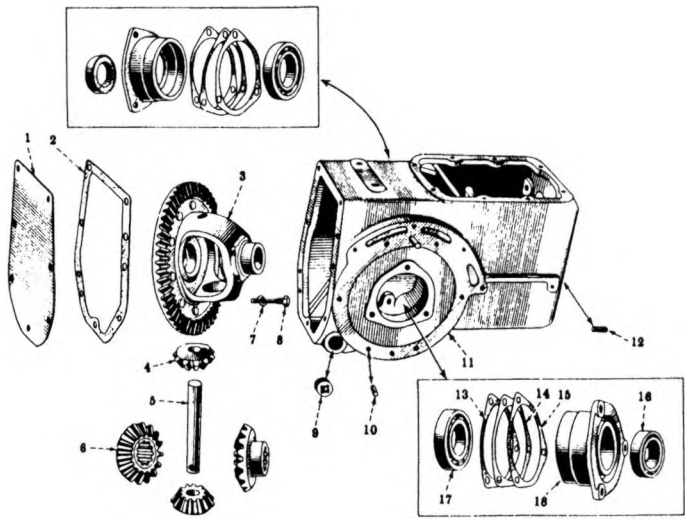
FOOT BRAKES

I H C Part No.	Description
6401 DAX	Brake drum.
6569 D	Brake pedal, left hand.
6570 DX	Brake pedal, right hand, complete.
8116 DA	Brake shaft bracket.
41476 D	Brake band lining rivet.
43528 D	Brake pedal locking screw.
43533 D	Brake pedal lock plate.
43539 D	Brake band anchor pin.
47845 DA	Brake pedal return spring.
47851 D	Brake band lining.
47859 D	Brake ratchet pawl.
49005 D	Brake ratchet pawl pivot pin.
51293 D	Brake pedal lock plate tension spring.
51425 DX	Brake shaft, left hand, complete.
51582 DX	Brake band, complete with rod.
52961 D	Brake shaft, right hand, complete.
52965 D	Foot rest.
10764 V	Brake rod adjustable yoke.
10765 V	Brake rod adjustable yoke pin.

ENGINE CLUTCH (9") AND CONNECTIONS

I H C Part No.	Description
47832 D	Clutch, complete (9" spring-loaded).
6116 D	Clutch release sleeve.
6400 D	Clutch pedal.
6830 DX	Clutch housing, complete.
16881 D	Clutch rod yoke pin.
18567 D	Clutch release bearing.
22977 DA	Transmission case to clutch housing dowel.
30718 DX	Clutch facing package.
36048 D	Driven member assembly.
43546 D	Clutch release sleeve guide.
43549 D	Clutch drive shaft joint disc.
43550 D	Clutch drive shaft joint rubber washer.
43551 D	Clutch drive shaft joint rubber washer retainer.
43552 D	Clutch drive shaft joint screw.
46278 D	Clutch release yoke pivot pin,
47286 D	Clutch shaft.
47714 DX	Clutch housing cover, complete.
47716 D	Clutch release yoke, complete.
47845 DA	Clutch pedal return spring.
49401 D	Clutch rod adjustable yoke.
49402 D	Clutch operating rod.
51452 D	Cover assembly.
51453 D	Back plate assembly.
51455 D	Adjusting screw seat.
51456 D	Pressure plate.
51457 D	Lever assembly.
51458 D	Lever.
51459 D	Adjusting screw.
51460 D	Lever pin.
51461 D	Lever spring.
51462 D	Clutch spring.
H 1290	Clutch rod end pin.
Q 3615	Clutch release sleeve lubricator.
20090 VA	Spring cup.
53795 V	Tubular rivet (20 used).

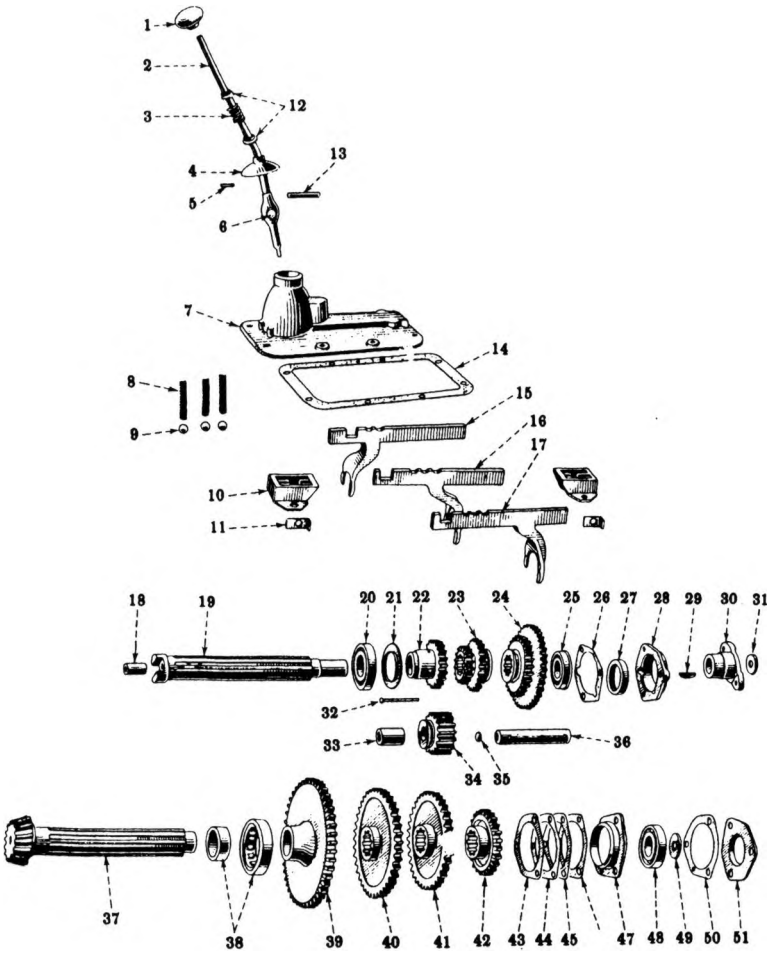
TRANSMISSION CASE AND DIFFERENTIAL



Unnumbered parts in the illustration are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description
1	46060 D	Cover plate.
2	46061 DA	Cover plate gasket.
3	46385 D	Differential case with gear.
4	42099 H	Pinion (11 teeth).
5	1094 Y	Pinion shaft.
6	42098 H	Gear (16 teeth).
7	.....	Lockwasher, 3/8".
8	1095 Y	Screw.
9	.....	Pipe plug, 1".
10	24550 D	Dowel.
11	8105 DX	Case.
12	7210 T	Bearing cage stud.
13	46062 D	Shim (light).
14	46063 D	Shim (medium).
15	46064 D	Shim (heavy).
16	46282 D	Retainer oil seal.
17	ST 202	Bearing.
18	6578 DX	Bearing retainer.

When ordering parts, always use IHC Part Numbers



Unnumbered parts in the illustration are the same as corresponding parts shown with numbers.

TRANSMISSION - Continued

Ref. No.	I H C Part No.	Description
1	48427 D	Lever ball.
2	49493 D	Lever.
3	43578 D	Spring.
4	49489 D	Shield.
5	43580 D	Pin.
6	49488 D	Swivel shaft, large.
7	6832 DAX	Cover, complete.
8	41058 D	Poppet ball spring.
9	4596 D	Poppet ball (1/2").
10	47289 DA	Shift rail guide.
11	48567 D	Cap screw lock.
12	43579 D	Spring retainer.
13	49492 D	Swivel shaft, small.
14	47279 DA	Gasket.
15	51178 DX	Reverse shifter fork.
16	48833 DX	First and second shifter fork.
17	48834 DX	Third and fourth shifter fork.
18	43268 D	Bushing.
19	49297 DAX	Spline shaft.
20	ST 205	Bearing.
21	51174 D	Retainer.
22	51175 DX	Gear (20 teeth).
23	49304 DA	Gear (16 and 22 teeth).
24	49305 DA	Gear (26 and 37 teeth).
25	43277 D	Bearing.
26	46503 D	Gasket.
27	42177 D	Oil seal.
28	6425 DX	Retainer.
29	13552 D	Key.
30	43548 D	Flange.
31	43262 DA	Washer.
32	.....	Rivet, 3/16 x 2-1/4".
33	51177 D	Bushing.
34	51176 DX	Gear (16 teeth).
35	13136 D	Plug.
36	43272 DB	Idler shaft.
37	49298 D	Shaft and pinion (13 teeth).
38	49339 D	Bearing.
39	49299 DB	Gear (45 teeth).
40	49300 DA	Gear (39 teeth).
41	49301 DA	Gear (35 teeth).
42	49302 DA	Gear (24 teeth).
43	47284 D	Shim (light).
44	47285 D	Shim (medium).
45	47286 D	Shim (heavy).
46	50493 D	Shim (fine).
47	47281 D	Bearing cage.
48	ST 213	Bearing.
49	43262 DA	Washer.
50	47283 D	Gasket.
51	47282 D	Retainer.
...	47280 D	Idler shaft hole plug.

When ordering parts, always use IHC Part Numbers.

REAR AXLE AND DIFFERENTIAL

I H C Part No.	Description
6401 DAX	Brake drum.
6594 DX	Rear axle bearing retainer, complete.
6823 DX	Differential shaft housing, complete.
6827 DX	Rear axle housing, left hand, complete.
6828 DX	Rear axle housing, right hand, complete.
43233 D	Differential shaft bearing lock ring.
43240 D	Rear axle shaft washer.
43242 D	Rear axle felt washer.
43244 D	Rear axle housing pan.
43245 D	Rear axle housing pan gasket.
43283 D	Rear axle oil seal.
47299 D	Brake drum key (Woodruff No. 22).
47905 D	Rear axle shaft, left hand, bearing spacer.
47906 DX	Rear axle shaft, right hand, bearing spacer, complete.
47907 D	Rear axle shaft, right hand, bearing spacer washer.
47946 D	Rear axle housing bearing cap.
47954 D	Rear axle housing bearing cap gasket.
48009 D	Rear axle bearing retainer gasket.
48009 D	Differential shaft bearing cover gasket.
48010 D	Differential shaft bearing cover.
49310 DA	Rear axle shaft.
49313 D	Rear axle inner bearing washer.
49366 D	Differential shaft, left (13 teeth).
49367 D	Differential shaft, right (13 teeth).
49901 DX	Rear axle drive gear with hub, complete.
49903 D	Rear axle bearing spacer.
50492 D	Differential ball bearing retainer shim, fine.
51494 DA	Differential shaft pinion oil seal.
42099 H	Differential pinion (11 teeth).
ST 205	Rear axle inner bearing.
ST 239	Differential shaft ball bearing.
10690 V	Rear axle bearing, outer.
53972 V	Differential drive gear rivet.
1094 Y	Differential pinion shaft.

FRONT WHEELS

I H C Part No.	Description
8331 D	Front wheel hub.
8333 D	Front wheel (less tire) (for 6 x 12 tire).
23760 D	Front wheel felt washer.
23762 DX	Front wheel hub shield, complete.
42183 D	Front wheel bearing oil seal.
52984 D	Front wheel hub gasket.

REAR WHEEL

I H C Part No.	Description
51280 D	Rear wheel rim, complete with clamps (7.00/24 for 8-24 tire).
51485 D	Rear wheel hub bolt.
52630 D	Rear wheel disc.

NOTE: Pneumatic tires and inner tubes should be ordered from Manufacturer.

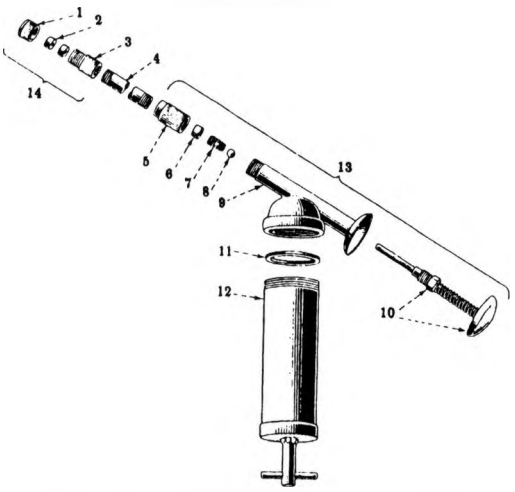
FRONT AXLE

I H C Part No.	Description
8324 D	Front wheel fork lower bearing cage.
8325 DX	Front wheel fork lower bearing cage cover, complete.
18511 D	Front wheel fork bearing, lower.
23742 D	Front axle nut.
23743 D	Front axle nut lockwasher.
48776 D	Front wheel fork oil seal.
52949 D	Front axle.
52950 D	Front wheel fork.
52951 D	Front wheel fork lower bearing cage gasket.
52952 D	Front wheel fork lower bearing cage cover gasket.
52953 DX	Front wheel fork upper bearing washer, complete.
53001 DX	Front wheel fork shaft, complete.
53002 D	Front wheel fork mounting stud.
Q 3615	Front axle lubricator.
10690 V	Front wheel fork bearing, upper.

STEERING MECHANISM

I H C Part No.	Description
6660 D	Steering worm bearing retainer.
8329 DX	Steering shaft support bracket, complete.
8330 DAX	Steering gear housing, complete.
13054 D	Universal joint key.
41096 DB	Steering worm bushing.
43800 D	Steering worm shaft oil seal.
46512 DB	Steering wheel.
47956 DBX	Steering shaft support arm, complete.
52976 D	Steering shaft.
52977 D	Steering shaft universal joint.
52978 D	Steering worm.
52979 D	Steering worm wheel (31 teeth).
52980 DX	Starting crank bracket, complete.
53218 DX	Steering gear housing vent plug, complete.
53961 D	Steering gear housing vent, complete.
Q 3615	Steering shaft support bracket lubricator.
Q 3626	Universal joint lubricator.
Q 3673	Steering worm shaft lubricator.
ST 225	Steering worm shaft ball bearing.
5526 T	Universal joint pin.
7235 T	Steering wheel key.

LINCOLN LUBRICATOR



Unnumbered parts in the illustration are the same as corresponding parts shown with numbers.

Ref. No.	I H C Part No.	Description
...	Q 3803	Lubricator, complete (3 ounce).
1	39653 D	Cap.
2	39656 DX	Set of 2 washers.
3	39652 D	Nozzle body.
4	.....	1/8" standard pipe (3" long).
5	40555 DX	Adapter.
6	40546 D	Adapter packing.
7	40553 D	Spring.
8	39659 D	Check ball.
9	40556 D	Body casting.
10	40538 D	Plunger assembly.
11	40542 D	Gasket.
12	52034 D	Container assembly.
13	40541 D	Head assembly.

When ordering parts, always use IHC Part Numbers.

LIST OF REPAIR PARTS
FOR SPECIAL EQUIPMENT

Description	Page No.
Belt pulley and power take-off attachment.	59
Electric Lighting attachments.	56
Exhaust Muffler attachment	58
Piston attachment (5000 ft. altitude).	57
Piston attachment (8000 ft. altitude).	57
Power take-off attachment.	59
Rear wheel pneumatic tire equipment (optional)	57
Swinging drawbar attachment.	58
Wheel weights (front wheels)	58
Wheel weights (rear wheels).	58

50944 D - Electric Lighting Attachment (1 Head Lamp and 1 Rear Lamp).
50945 D - Electric Lighting Attachment (2 Head Lamps and 1 Rear Lamp).
*50946 D - Electric Lighting Attachment (1 Head Lamp, L.H. Only).

* *For Field Application on Tractors already equipped with 50944 D att.*

I H C Part No.		I H C Part No.	
6812 D	Generator pulley.	45569 D	Lamp spacer.
6813 D	Rear lamp bracket.	45634 D	Generator (Delco-Remy No. 1101355).
12061 D	Fuse (AG-15 Amperes) (Not used on Attach.50944 D).	45640 D	Lamp (swivel type).
22063 D	17/32" cable clip (for 3/8" bolt).	47889 D	Lighting switch dimmer resistance.
27369 D	Lamp bulb - 32 candle power 6-8 volt.	47890 D	Lighting switch.
		47890 DX	Lighting switch, complete.
27378 D	Battery to ground cable loom.	47891 D	Lighting switch generator field resistance.
27385 D	1/4" loom clip for 3/8" bolt.	49279 D	Generator brace stud.
		49282 D	Rear lamp post.
27387 D	Double 1/4" loom clip.	49287 DA	Generator bracket assembly.
27618 D	Cable loom clamp ring.	49288 D	Generator brace.
27618 D	Cable loom clamp ring.	49291 D	Generator belt.
27618 D	Cable loom clamp ring.	49393 D	Right front lamp post.
27618 D	Cable loom clamp ring.	49394 D	Left front lamp post (not used on attach. 50944 D).
28318 D	Fan hub assembly.		
28821 DA	Fan, complete with double pulley hub.	50929 D	Instrument panel.
		50930 DX	Instrument panel cover, complete.
29205 D	Switch to rear lamp cable loom.	50937 DX	Battery box cover, complete.
30711 DX	Switch to rear lamp cable, complete with loom.	50939 DX	Battery box cover hold down screw, complete.
35407 D	Battery to ground cable, complete with loom.	50943 D	Battery box, complete.
		51063 D	Instrument panel machine screw.
38092 D	Ammeter to switch cable loom.	51690 D	Battery hold down rubber, short.
38433 D	Switch to right head lamp cable terminal.	51998 D	Lighting cable harness, complete.
38433 D	Switch to left head lamp cable terminal.	51999 DX	Battery to ammeter cable, complete with loom.
38433 D	Generator field to switch cable terminal-13/64" stud hole.	52030 DX	Ammeter to switch cable, complete with loom.
38433 D	Generator to ammeter cable terminal.	52062 D	Instrument panel cover grommet.
38433 D	Ammeter to switch cable terminal.	52063 D	Battery box body grommet.
		52116 D	Front lamp post loom clamp.
38433 D	Switch to rear lamp cable terminal.	6830 H	1/4" cable clip for 3/8" bolt.
38433 D	Battery cable terminal.		
38767 D	Lighting switch mounting nut lockwasher.	26453 HX	Battery cable terminal bolt, complete.
38777 D	Battery cable terminal (negative), complete.	26454 H	Battery cable terminal bolt nut.
38778 D	Battery cable terminal (positive), complete.	27637 H	Generator field to switch cable terminal-7/32" stud hole.
38937 D	Battery to ground cable terminal.	28499 H	Lighting cable insulator, small.
39016 D	Battery to ammeter cable loom.	28500 H	Lighting cable insulator, large.
42383 D	Ammeter.		
43036 D	Lighting switch mounting nut.	10815 V	Fuse (AG-10 amperes) (Not used on Attach.50945 D).
43037 D	Lighting switch handle.	11154 VA	Fan hub gasket.
43038 D	Lighting switch mounting screw.	1408 YC	Battery, 6 volt (Model 613 BE Prest-O-Lite).

8000 FT. ALTITUDE PISTON ATTACHMENT (51188 D)

I H C Part No.	Description
6075 DX	Cylinder sleeve with packing ring.
8122 DY	Piston with pin and 4 rings, complete.
8122 DX	Piston with pin and retainer rings, complete.
24414 DB	Piston pin.
24416 DA	Piston ring, compression.
24434 D	Cylinder sleeve packing ring.
35493 D	Piston ring, taper, compression.
43276 D	Piston ring, oil control.
51188 D	Set of 4 cyl. sleeves with pistons, complete.
51362 D	Cylinder sleeve with piston.
35651 H	Piston pin retainer spring.

5000 FT. ALTITUDE PISTON ATTACHMENT (51189 D)

I H C Part No.	Description
6075 DX	Cylinder sleeve with packing ring.
8123 DX	Piston with pin and retainers, complete.
8123 DY	Piston with pin and rings, complete.
24414 DB	Piston pin.
24416 DA	Piston ring, compression.
24434 D	Cylinder sleeve packing ring.
35493 D	Piston ring, taper, compression.
43276 D	Piston ring, oil control.
51189 D	Set of 4 cylinder sleeves with pistons.
51361 D	Cylinder sleeve with piston.
35651 H	Piston pin retainer spring.

OPTIONAL REAR WHEEL PNEUMATIC TIRE EQUIPMENT

I H C Part No.	Description
51281 D	Rear wheel rim, complete with clamps (8.00/24 rim for 9-24 tire).
52873 D	Rear wheel rim, complete with clamps (5.50R/24 rim for 7.00/24 tire.)

DETAIL PARTS OF LAMP (45640 D) (MODEL 873 A)

I H C Part No.	Description
27369 D	Bulb (32 candle power 6-8 volt).
37064 D	Terminal plate.
37067 D	Terminal plate assembly.
37072 D	Cup assembly.
37075 D	Terminal Insulating Washer.
37077 D	Terminal lockwasher (Shakeproof 1208).
53521 D	Lens.
53522 D	Body assembly.
53523 D	Deflector assembly.
53524 D	Wiring assembly.
53525 D	Moulding assembly.
53526 D	Moulding screw.
53527 D	Gasket assembly.

EXHAUST MUFFLER ATTACHMENT (48831 D)

I H C Part No.	Description
48832 D	Exhaust muffler.
48889 D	Exhaust muffler clamp.

SWINGING DRAWBAR ATTACHMENT (52989 D)

I H C Part No.	Description
52990 DX	Swinging drawbar, complete.
52992 DX	Swinging drawbar anchor bar, complete.

REAR WHEEL WEIGHT ATTACHMENTS
Attachment, First (50476 D)
Attachment, Second (50477 D)

I H C Part No.	Description
6701 DA	Rear wheel weight, first (140 lbs. each).
6701 DA	Rear wheel weight, second (140 lbs. each).

1 - 48104 D Belt Pulley and Power Take-Off Attachment
2 - 48153 D Power Take-Off Attachment

I H C Part No.	Description	Used on 1	Used on 2
6614 DX	Belt pulley drive housing, complete	x	-
6615 DX	Power take-off drive housing, complete	x	x
6629 D	Power take-off cover	-	x
8257 D	Belt pulley (8½" dia., 6" face)	x	-
13552 D	Power take-off gear key (Woodruff 126)	x	x
17581 D	Power take-off drive housing dowel	x	x
29978 D	Power take-off shaft guard clamp	x	x
43262 DA	Power take-off drive shaft washer	x	x
43262 DA	Power take-off shaft washer	x	x
43262 DA	Belt pulley shaft washer	x	-
43624 D	Power take-off drive pinion (17 teeth)	x	x
43630 D	Belt pulley shaft spacer	x	-
43631 D	Belt pulley drive bevel pinion (19 teeth)	x	-
43645 D	Power take-off shifter lever felt washer	x	x
43670 D	Belt pulley drive housing end plug	x	-
46061 DA	Power take-off drive housing gasket	x	x
47281 D	Power take-off drive shaft bearing cage	x	-
47281 D	Belt pulley shaft bearing cage	x	-
47283 D	Belt pulley shaft bearing cage gasket	x	-
47284 D	Power take-off drive shaft bearing cage shim, medium	x	-
47284 D	Belt pulley shaft bearing cage shim, light	x	-
47285 D	Power take-off drive shaft bearing cage shim, medium	x	-
47285 D	Belt pulley shaft bearing cage shim, medium	x	-
47286 D	Power take-off drive shaft bearing cage shim, heavy	x	-
47286 D	Belt pulley shaft bearing cage shim, heavy	x	-
48084 D	Power take-off cover gasket	-	x
48084 D	Belt pulley drive housing gasket	x	-
48085 DAX	Belt pulley shaft bearing retainer, complete	x	-
48087 D	Belt pulley spacer	x	-
48089 D	Power take-off drive shaft oil trough	x	-
48090 D	Power take-off gear (44 teeth)	x	x
48091 DA	Power take-off shaft	x	x
48092 D	Power take-off shaft bearing spacer	x	x
48093 D	Power take-off shaft oil slinger	x	x
48094 D	Power take-off drive shaft bearing retainer	x	x
48102 D	Power take-off shifter poppet	x	x
48103 D	Power take-off shifter poppet spring	x	x
48114 D	Power take-off shaft oil seal	x	x
48152 D	Power take-off drive shaft spacer	-	x
48954 D	Belt pulley shaft oil seal	x	-
51484 DX	Power take-off shaft guard, complete	x	x
52632 D	Belt pulley shaft (23 teeth)	x	-
52666 D	Power take-off drive shaft	x	x
52668 D	Power take-off shifter, complete	x	x
53515 D	Power take-off shifter lever	x	x
53517 D	Power take-off shifter lever shaft, complete	x	x
54001 DX	Belt pulley shaft guard, complete	x	-
63441 H	Belt pulley shaft bearing, inner	x	-
7225 T	Power take-off drive pinion key	x	x
7225 T	Belt pulley drive pinion key	x	-
ST 212	Power take-off drive shaft bearing	x	x
ST 212	Belt pulley shaft bearing, outer	x	-
ST 213	Power take-off shaft bearing	x	x

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IMPORTANT

The owner will aid in rendering prompt and efficient service, by a careful observance of the following:

1—When ordering parts, give the Tractor Serial Number.

2—Write the part number wanted excatly as shown in parts list.

3—All orders should be sent to the Dealer or the Branch House in charge of territory.

4—Give definite shipping instructions. When ordering by telegraph, prepay, and give correct address.

So that you may have it before you, write both the Tractor and Engine Serial numbers here:

*Tractor Serial No.*_____
(Stamped on name plate on pedal guard)

*Engine No.*_____
(Stamped on crankcase side)

Do not omit prefix or suffix letters appearing with numbers.

SPECIFICATIONS

Capacities (U. S. Measure)

Gasoline tank (when operating on Kerosene or Distillate)	Approx. 1 gal.
Fuel tank	Approx. 10 gals.
Water cooling system	Approx. 3⅜ gals.
Crankcase pan	Approx. 5 qts.
Transmission case	Approx. 6 qts.
Steering gear housing	Approx. 1 pint
Rear axle drive housing (each)	Approx. 3 pts.

Engine

Cylinders	4
Bore	3 in.
Stroke	4 in.
Engine speed (governed)	1400 R.P.M.
*Power take-off shaft speed	540 R.P.M.
Magneto (fixed spark)	IHC Type H-4
Spark plug gap	.020 to .025 in.
Valve clearance (engine hot)	.014 in.
Carburetor (with Donaldson Air Cleaner	Zenith

Clutch and Belt Pulley

Single-plate, dry-disk (spring-loaded)	9 in.
*Pulley speed	1156 R.P.M.
*Belt speed (with 8½" pulley	2573 ft. per min.
*Pulley diameter	8½ in.
*Pulley face	6 in.

*—*Special (furnished when ordered)*

Foot Brakes

External contracting on drums.

Transmission (Four-Speed)

Speed (miles per hour) (Based on 8-24 (¾ round) pneumatic tires)	1st	2¼
	2nd	3½
	3rd	4¾
	High	9⅝
	Reverse	2¾

Wheels and Tread

Front wheel (for pneumatic tires)	6.00 x 12 in.
Rear wheel (for pneumatic tires)	8.00 x 24 in.
Wheelbase	74 in.
Tread, rear	66 to 94 in.

General Dimensions

Length (over-all)		109 in.
Width (over-all) maximum (94" rear tread)		102½ in.
Height (over-all) (steering wheel)		63¼ in.
Drawbar (adjustable)	height	15¼ in.
	vertical adjustment	11½ to 17 3/16 in.
	lateral adjustment	16⅛ in. to each side of center hole
Ground clearance		21 in.
Turning radius (brake applied) (Based on 66" tread)		7 ft. 6 in.

Order Genuine Parts for Replacements

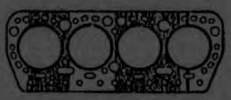
Satisfactory and efficient service in the operation of this or any other machine is endangered by the use of inferior repairs, as cheap parts invariably mean short life and high cost.

If parts could be manufactured at a lower cost and sold at lower prices without sacrificing quality, this would be done. The right material for the purpose and the knowledge acquired through many years of manufacturing enables International Harvester Company to produce quality that will not be found in imitation repairs.

Inferior repair parts are sold for IHC machines, but you take an unnecessary risk when you buy them.

Our customers should remember that whenever they find repairs furnished are not as GOOD as the parts on a New IHC Machine, they are NOT getting GENUINE parts.

Buying "will fit" parts to save money is like stopping the clock to save time.



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